

David G. Lewis, Wyoming Bar No. 4-1150
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Attorney for Plaintiffs

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING

FRANCISCO L. HERRERA, and JOANNA
HERRERA, CO-WRONGFUL DEATH
REPRESENTATIVES, for the exclusive
benefit of the beneficiaries of MONICA
HERRERA, deceased, who have sustained
damages from her wrongfully caused death.

Plaintiffs,

vs.

GREGORY BUCKINGHAM and DEBORAH
BUCKINGHAM, but in their individual capacities as
Trustees of the BUCKINGHAM FAMILY TRUST;
and, GREGORY BUCKINGHAM and DEBORAH
BUCKINGHAM as individual defendants; and,
WYOMING MECHANICAL, INC. a Wyoming
Corporation; Triangle Tube/Phase III CO. Inc. a
New Jersey Corporation; and M&G DURAVENT,
INC. a New York Corporation,

Defendants.

Case No. 15-cv-128-F

**PLAINTIFFS' EXPERT
WITNESSES (SECOND)**

Comes now Plaintiffs, by and through their attorney, David G. Lewis, and
designate their Expert Witnesses as follows:

RETAINED EXPERT WITNESSES

Plaintiff has retained the following individuals as expert witnesses to testify in this litigation. Plaintiff will provide these experts, without subpoena, for deposition at Defendants' expense. As discovery is on-going, Plaintiffs reserve the right to supplement this designation as new information is made known to the Plaintiffs or their experts. Plaintiff reserves the right to supplement this designation in response to any expert designation by Defendants, and any corresponding deposition of any expert designated by the Defendants. All depositions and discovery responses are therefore incorporated by this reference herein.

1. BERNARD CUZZILLO, Ph.D., P.E.
President, Mechanical Engineer, and Fire Scientist
Berkeley Research Company
600 Addison St.
Berkeley, CA 94710-1920
(510) 868-4350

Bernard Cuzzillo, Ph.D., P.E., is an expert mechanical engineer and fire scientist. Dr. Cuzzillo obtained his B.S. from U.C. Berkeley in Mechanical Engineering in 1980; his M.S. in Mechanical Engineering from U.C. Berkeley in 1982; and he completed a Doctorate in Mechanical Engineering from U.C. Berkeley in 1997. Dr. Cuzzillo is a registered mechanical engineer in the State of California, and a member of ASM International, the National Fire Protection Association, the American Society of Mechanical Engineers, and the Society of Forensic Engineers and Scientists. Dr. Cuzzillo is an invited lecturer in Mechanical Engineering 290F, a graduate class entitled Case Studies in Fire Safety Engineering Science, at the University of California at Berkeley. He has twice (2000, 2007) been the co-chairman of the seminars, Society of Forensic Engineers and Scientists. Plaintiff retained Dr. Cuzzillo to investigate and reconstruct the cause and circumstances leading to the January 30, 2015 carbon monoxide exposure incident that killed Monica Herrera.

Summary of testimony / comprehensive statement of each of the opinions of

such witness and the factual basis for each opinion:

- a. Dr. Cuzzillo's written report - including a summary of his opinions and a comprehensive statement of each of his opinions and the factual basis for each opinion - is attached and incorporated herein as a part hereof;
- b. Dr. Cuzzillo's curriculum vitae, including a list of all publications authored within the last ten years, is attached;
- c. A listing of any other cases in which he has testified as an expert at trial or by deposition in the preceding four years is attached;
- d. Dr. Cuzzillo does not insist on any special conditions or requirements for taking his deposition. Dr. Cuzzillo charges \$450 per hour for consulting, and for deposition and trial testimony, including traveling and waiting time. In the case of further deposition testimony his charges begin at the appointed time.

If called as a witness at trial, Dr. Cuzzillo will testify to the facts and opinions contained in this report. The Defendants Buckingham and the Defendant Wyoming Mechanical took the deposition of Dr. Cuzzillo in Oakland, California, on December 7, 2015. Dr. Cuzzillo may also testify at trial regarding any facts and opinions discussed during his December 7, 2015 deposition.

The recently added Defendants in this matter, M&G DuraVent, Inc., and Triangle Tube/Phase III Co., Inc., have both expressed their intention to take the deposition of Dr. Cuzzillo. The Defendants Buckingham and Wyoming Mechanical have also expressed their intention to participate in the second deposition of Dr. Cuzzillo. Dr. Cuzzillo may testify at trial regarding any facts and opinions discussed during his anticipated second deposition.

Dr. Cuzzillo reserves the right to supplement his opinions based upon review of additional information acquired, and he reserves the right to provide rebuttal testimony

to any facts or opinions offered by the defendants' experts.

2. James Sondgeroth
Quarter Circle 4 Heating and Plumbing, Inc.
P. O. Box 7212
Jackson, Wyoming 83002

Mr. Sondgeroth is the owner and operator of Quarter Circle 4 Heating and Plumbing Company, Inc.. He began working in plumbing and heating as a youngster from 1972 to 1976, working for and with his grandfather and father, both plumbers. He attended the University of Colorado on a wrestling scholarship, and graduated from there with a degree in education in 1980. Since 1980, he has worked full time as a plumber. From 1990 to 2005, he was the foreman for the Defendant Wyoming Mechanical. In 2005, Mr. Sondgeroth formed Quarter Circle 4 Heating and Plumbing. Mr. Sondgeroth is a Master Plumber. (copy attached)

Mr. Sondgeroth has installed many boilers and hydronic heating systems in businesses and residences in Teton, Park, Sublette, and Lincoln Counties. Among these are boilers manufactured by Triangle Tube, including the Prestige Solo 175. His plumbing experience with Triangle Tube over the past years has been that when properly installed, the Prestige Boiler is reliable and safe. Since his designation by Plaintiffs in the Plaintiffs' First Designation of Experts, Mr. Sondgeroth has, recently, experienced problems with the Triangle Tube boilers, including the Prestige 175 such that he has decided not to recommend them to his customers for installation and heating. As soon as Plaintiffs' attorney and Mr. Sondgeroth are able to verify certain information, the undersigned attorney will pass this information on to the other parties.

Mr. Sondgeroth will further testify that he is very familiar with the practice of his plumbers employed by Quarter Circle 4, as well as those of the plumbers in Teton County in general, regarding carbon monoxide problems. He will further testify that if

a customer calls his company with a flue pipe leaking combustion gases into a home or business, he would warn the occupant to immediately shut the boiler off, immediately vacate the premises, and assure the caller that he or one of his employees would immediately go to that site and address the problem. His experience is that other plumbers in Jackson Hole would do the same.

Mr. Sondgeroth charges \$125.00 per hour to give a deposition or to testify in a Courtroom, plus any travel expenses.

3. Rick Hirschi, Ph.D.
Economic Consultant
1763 N. 3000 W.
Rexburg, Idaho 83440
(208) 496-3806

Dr. Hirschi is professor of economics at BYU-Idaho in Rexburg. He has been retained by Plaintiffs to calculate the losses suffered by Plaintiffs as a result of the wrongful death of their Daughter, Wife, Mother, Aunt (Guardian of two nieces), and Grandmother. Dr. Hirschi's evaluation of losses Preliminary Report has been specifically prepared for this case, and it is incorporated herein by this reference as a part hereof.

Dr. Hirschi is presently unavailable for the remainder of this week, but he will provide a history of legal cases with which he has had an involvement as an expert witness. As soon as the same is provided, it will be given to supplement this report, and copies provided to counsel.

Dr. Hirschi may have other opinions, and will certainly elaborate on the opinions expressed above. After the development of further facts and the rendering of other economic loss opinions, this designation may be amended or supplemented. Dr. Hirschi may also respond to the opinions of other economic experts who may be retained in this matter by other parties. When the deposition of Dr. Hirschi is taken, the

opinions which he expresses therein are to be incorporated into this designation statement.

Dr. Hirschi's fee for giving a deposition is \$600 for a deposition given in southeastern Idaho; and, \$750 for a deposition taken outside southeastern Idaho. Any deposition lasting longer than three hours will be billed at \$200 per hour. Travel to and from any destination is \$75 per hour to and from the deposition. All actual expenses incurred for travel, lodging, and meals, and any other expenses necessary for deposition travel or attendance shall be reimbursed at the amount of the cost incurred.

Summary of testimony / comprehensive statement of each of the opinions of such witness and the factual basis for each opinion:

- a. Dr. Hirschi's written report - including a summary of his opinions and a comprehensive statement of each of his opinions and the factual basis for each opinions - is attached;
- b. Dr. Hirschi's curriculum vitae, including a list of all publications authored within the last four years is attached;
- c. A listing of any other cases in which he has testified as an expert at trial or by deposition in the preceding four years will be provided as described above;
- d. Dr. Hirschi does not insist on any special conditions or requirements for taking his deposition. Dr. Hirschi's deposition charges are included in the description of his charges, above.

None of the four Defendants have provided in their initial discovery the tax returns and other financial information upon which punitive damages could be calculated; even though the grounds and prayers for punitive damages are clearly alleged. The case for punitive damages against the Defendants Buckingham and Wyoming Mechanical is strong and based upon uncontroverted evidence. The

foreseeable and avoidable CO exposure caused acute carbon monoxide poisoning and Monica Herrera's death. The failure of the Buckinghams to provide a reasonably safe place to work, and their failure to warn Mrs. Herrera of a known deadly condition at their residence where she was coming to work, was highly unreasonable conduct, an extreme departure from ordinary care in a situation where the need for a high degree of care was apparent. Wyoming Mechanical's intentional, consciously chosen, self-imposed ignorance and avoidance of the mortal dangers to the occupants of the residence, including Monica Herrera, was also beyond reckless. The manufacture and sale of the defective Triangle Tube boilers and DuraVent pipe designed to transport deadly gases from inside the walls of human habitation require the utmost care on the part of manufacturers and distributors of the products. Neither followed internal standards and protocols of manufacturing safety required by State and Federal law leading to the creation and distribution of dangerously defective products. Such conduct would support an award of punitive damages.

Defendants should not postpone providing their financial information regarding the probable applicability of punitive damages in this matter. Once that financial information is provided, Plaintiffs can assess the full extent of their recoverable damages, and provide reasonable demands for settlement.

If called as a witness at trial, Dr. Hirschi will testify to the facts and opinions contained in his report. Plaintiffs anticipate that the Defendants will take Dr. Hirschi's deposition prior to the discovery cut-off. Dr. Hirschi may also testify at trial regarding any facts and opinions discussed during his anticipated deposition.

Dr. Hirschi reserves the right to supplement his opinions based upon review of additional information acquired, and he reserves the right to provide rebuttal testimony

to any additional facts or opinions offered by the Defendants' experts.

NON-RETAINED EXPERT WITNESSES

4. Lars T. Conway, MD
Teton Pathology, P.C.
Anatomic & Clinical Pathology
P. O. Box 4940
625 E. Broadway
Jackson, Wyoming 83001
(307) 733-6418

Dr. Conway is a Jackson, Wyoming pathologist who has practiced as such for 22 years. He performed an Autopsy on Monica Herrera following her death at the Buckingham Residence in Teton County, Wyoming. The autopsy was performed by Dr. Conway in order to determine the cause of Monica's death, at the Teton County Morgue in Jackson at the request of Brent A. Blue, MD, Teton County, Wyoming Coroner. Dr. Conway's final anatomical diagnosis at the autopsy was "Carbon monoxide poisoning (carboxyhemoglobin level 76%)."

This is an extraordinarily high concentration of CO in the blood stream.

Summary of testimony / comprehensive statement of each of the opinions of such witness and the factual basis for each opinion:

- a. Dr. Conway's written Autopsy Report is attached;
- b. Dr. Conway's curriculum vitae, is attached;
- c. A listing of any other cases in which he has testified as an expert at trial or by deposition in the preceding four years is attached;
- d. If Dr. Conway's deposition is to be taken in the morning, it would have to be taken in his office at the hospital, where he must be available to examine surgical samples. If in the afternoon, it may be possible to take his deposition outside the hospital. Dr. Conway charges a fee of \$600 for his deposition.

If called as a witness at trial, Dr. Conway will testify to the facts and opinions contained in this report.

Respectfully submitted on this 1st day of April, 2016.

/s/
David G. Lewis
Attorney for Plaintiffs
P. O. Box 8519
Jackson, Wyoming 83002

CERTIFICATE OF SERVICE

This is to certify that on the 1st day of April, 2016, I served a true and accurate copy of the above and foregoing by electronic transmission as follows:

Julie Tiedeken, Esq.
jtiedeken@mtslegal.net

Cameron Walker, Esq.
cam@schwartzbon.com

Sean Scoggin, Esq.
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Katherine L. Mead
kate@meadlaw.net

Judy Studer, Esq.
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Joseph McGill
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Dick Waltz, Esq.
DWaltz@WaltzLaw.com

Jennifer Cupples, Esq.
jcupples@fbmjlaw.com

Christopher Reeves, Esq.
creeves@WaltzLaw.com

/s/
David G. Lewis
Attorney for Plaintiffs
P. O. Box 8519
Jackson, Wyoming 83002

BERNARD R. CUZZILLO, PH.D.

ATTACHMENTS

BERKELEY RESEARCH COMPANY

HERRERA et al.

Plaintiff,

v.

BUCKINGHAM et al.,

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING
Civil Case No. 15-cv-128-F

Carbon Monoxide Exposure Analysis

REPORT

Prepared November 2, 2015

for

David G. Lewis
Attorney at Law
P.O. Box 8519
Jackson, WY 83001
davelewis@bresnan.net

A handwritten signature in black ink, appearing to read "Bernard R. Cuzzillo", written over a horizontal line.

by Bernard R. Cuzzillo, Ph.D., P.E., C.F.I.

BRC File No. 15-0973B
Herrera, et al. v. Buckingham, et al.

November 4, 2015
Expert Report

APPENDICES PROVIDED SEPARATELY

1. Materials reviewed in forming my opinions for this case.
2. My *curriculum vitae*.
3. A list of testimony at deposition or trial for the past four years.

BRC File No. 15-0973B
Herrera, et al. v. Buckingham, et al.

November 4, 2015
Expert Report

INTRODUCTION

This reports my analysis of the causes of the subject carbon monoxide (abbreviated by its chemical symbol, CO) exposure on January 30, 2015 at the Buckingham residence, 8935 Ditch Creek Road, Kelly, WY.

This report begins with 1) an explanation of the boiler and vent system design and operation, 2) a brief synopsis of combustion fundamentals, and 3) an explanation of combustion air supply. I then proceed to explain what went wrong.

THE MECHANICAL SYSTEMS

The boiler:

Manufacturer:	Triangle Tube, a unit of ACV Manufacturing
Model:	Prestige Solo 175
Input rating:	170,000 BTU/hr
Fuel:	Liquefied propane (LP) gas
Burner:	Premixing forced draft
Mounting system:	Wall-hung
ASME classification:	Low-pressure heating boiler
Trade classification:	Hot-water-heating boiler (used for comfort heat only in this installation)
Heat exchanger:	Stainless steel fire-tube
Vent Category:	IV, positive pressure, condensing
Listing standard:	ANSI Z21.13
Circulating fluid:	Propylene glycol-based antifreeze, premixed, with feeder
Installed location:	2-car semi-detached garage

The vent piping:

Manufacturer:	DuraVent, a unit of M&G Group
Model:	PolyPro with old-style locking bands
Size:	3" nominal diameter
Layout:	Twin-pipe with horizontal concentric termination

The boiler burns a propane-air mixture to liberate heat that is transferred to the circulating fluid to heat the home. (Although the fluid never boils in this type of boiler, it is still called a "boiler.") Its flue gases are normally piped to the outdoors through the polypropylene vent pipes.

The air for combustion, called combustion air, although nominally piped from the outdoor air, is also drawn from the room air of the garage in which the boiler was installed.

The polypropylene vent pipe is known generically as Type BH and is listed under the Underwriters' Laboratories of Canada standard ULC-S636-08. Its joints are held together with steel locking rings that rely on friction to hold the joined pipes and fittings together.

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COMBUSTION 101

With complete combustion of hydrocarbon fuels in air, such as in the subject boiler, oxygen in the air combines with LP gas (which is mostly propane, C_3H_8) in the flame. The flame is a zone of high-temperature chemical reaction. As gases from the flame cool in the heat exchanger (transferring most of its heat to the water) the combustion process produces water vapor (H_2O) and carbon dioxide, or CO_2 . CO_2 is not toxic; in fact, our exhaled breath typically contains several percent CO_2 . A typical boiler of the subject design, operating correctly after warm up, will produce less than 100 parts per million (ppm)¹ CO in the outlet of its heat exchangers, and most often produce less than 20 ppm.

When insufficient oxygen is present in the flame zone for complete combustion, water vapor is still produced, but CO is also produced, roughly in proportion to the shortage of oxygen. By the time this CO reaches additional oxygen outside the boiler, the temperature is too low for it to react and form CO_2 , so it remains “frozen,” as toxic carbon monoxide.

WHAT WENT WRONG

The causes of CO exposure breaks down into two categories: 1) Production of unusually high levels of CO in flue gases, and 2) Transport of those flue gas into the breathing air.

In this case the two causes are related. The flue gas was spilled into the breathing air because of a disconnection of the flue pipe. The flue pipe's disconnection was triggered by audible explosions during ignition caused by delayed ignition which result in pressure pulses in the vent system. These pressure pulses apparently defeated the friction in the pipe joint.

Delayed ignition is an undesirable combustion event that is typically caused by defects in the ignition system—spark ignition in this case, similar in concept to a spark plug.

The delayed-ignition events and repeated disconnections had been occurring for at least several days before the incident.

The disconnection also led to flue gases being drawn into the combustion air which is partly drawn from the room air in the garage. Since flue gases are very low in oxygen and they displace the oxygen in fresh air, they cause a reduction in the oxygen-to-fuel ratio when they become part of the combustion air supply. Production of CO rises rapidly as oxygen in the flame zone is decreased below the amount chemically required for complete combustion. This limit is often referred to as the stoichiometric air-fuel ratio.

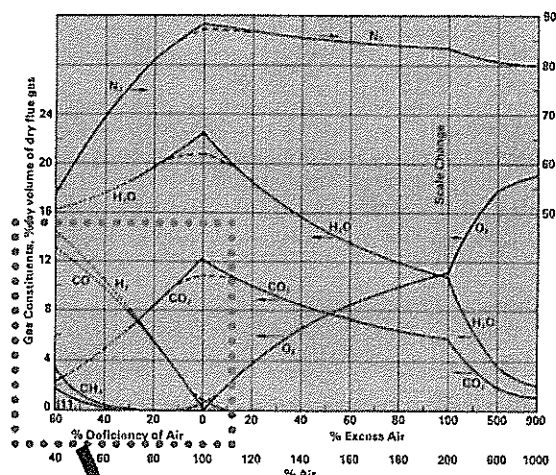
Even when supplied with clean air, the flue gas CO was above the maximum limit of 100 ppm set by the manufacturer even after Wyoming Mechanical readjusted it on February 2nd, 2015, the Monday after the Friday fatality. This means it was operating very close to the effective stoichiometric ratio. In this operating condition, the flue-gas CO level is very sensitive to any reduction in oxygen in the combustion air. In other words, there is no margin of safety. This is illustrated in the graph on the next page.

This effect was demonstrated with the subject boiler in laboratory testing on October 27, 2015. When I directed flue gas from a flexible hose at the bottom of the boiler where it was drawn into the combustion airflow, CO concentrations on my flue gas analyzer rose dramatically, to over 40,000 ppm.

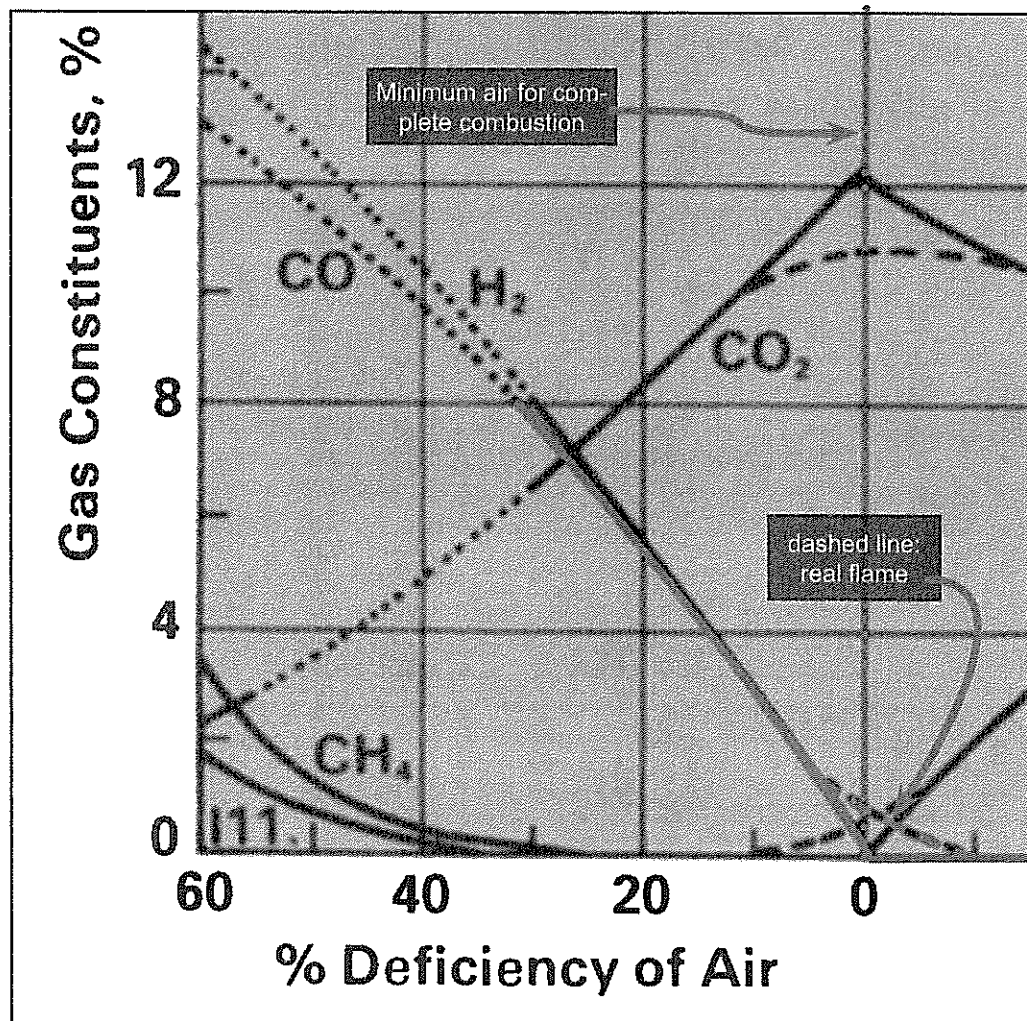
¹ One percent, being one part per hundred, is equal to 10,000 parts per million. So 100 ppm is equal to 0.01%.

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This graph shows the theoretical effect of oxygen-to-fuel ratio on emissions for a natural-gas and air flame. LP gas gives similar results. I have excerpted the part of the graph shown in the dotted-line box and enlarged it below. I have further highlighted the CO curve in red to draw particular attention to it. This illustrates the rapid rise in CO as oxygen drops below that required for complete combustion. The dashed line, representing an example of a real flame, shows that excess oxygen cannot be reduced to the theoretical minimum without the production of excessive CO. This is why Triangle's guideline range of flue-gas O_2 (required to achieve <100ppm CO) is 2.7 to 4.7%, which is well above 0%.

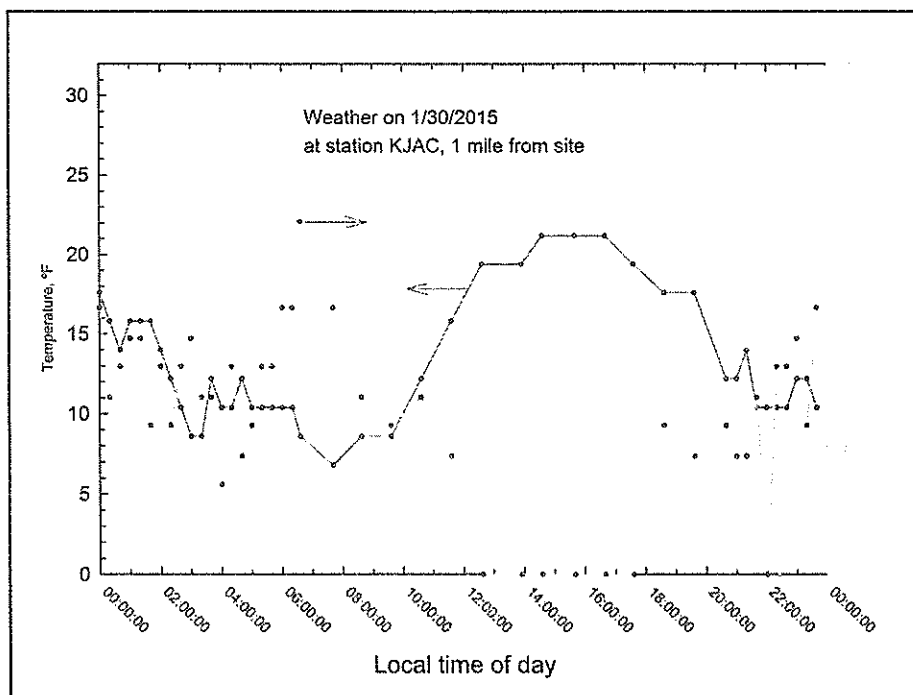


Source: Reed, R.J., ed., *North American Combustion Handbook, 2nd Edition*, North American Mfg. Co., 1978, p. 53.

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After the disconnection of the vent pipe in the garage, flue gases accumulate. The ultimate level of flue gas concentration is limited by outdoor-indoor air exchange which is strongly influenced by wind. Weather data from the nearest weather station, located a mile from the Buckingham's residence at the Kelly Campus of Teton Science Schools, shows the wind was nill during the afternoon hours before her body was discovered. This is shown in the graph below which also shows that the outdoor air temperature was well below freezing, which would result in the boiler operating at a high proportion of its capacity. This combination of low rates of air exchange and heavy boiler operation probably produced enough flue gas concentration in the garage to produce unusually high CO concentrations in the flue gas. This is consistent with the level of greater-than 1000 ppm measured by the first responders; their instrument cannot measure higher than 1000 ppm, so how much higher the actual concentration was is unknown. It is also consistent with the Ms. Herrera's postmortem 76% carboxyhemoglobin level—an unusually high level among CO fatalities and indicative of very high CO concentrations in the breathing air.



DISCUSSION AND CONCLUSION

As in most CO incidents, a confluence of factors came together to cause the fatality.

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MATERIALS REVIEWED

1. Teton County Sheriff's Office report dated February 4, 2015.
2. Jackson Hole Fire/EMS NFIRS report
3. Jackson Hole Fire/EMS comprehensive report
4. *Combustion*, 3rd edition, American Gas Association, 1938
5. Reed, R.J., ed., *North American Combustion Handbook, 2nd Edition*, North American Mfg. Co., 1978
6. Prestige 60 175 250 399 TriMax Manual, from Triangle Tube's website
7. Prestige Control Supplement, from Triangle Tube's website
8. Prestige PVC, CPVC, PP & SS Vent Supplement, from Triangle Tube's website
9. Prestige Solo sales brochure, from Triangle Tube's website
10. PolyPro catalog, dated 9/2014, from DuraVent's website
11. PolyPro installation instructions, dated 08/2014 from DuraVent's website
12. PolyPro installation instructions, dated 05/2012
13. PolyPro catalog, dated 1/2011
14. DuraVent Product Bulletin, NEW PolyPro Locking System Update, 2014, from DuraVent's website
15. Exemplar PolyPro pipe, fittings, and locking rings
16. My site inspection on October 26, 2015
17. My laboratory testing on October 27, 2015 at AEI in Littleton, CO
18. Photos, videos, notes, and instrument data taken by Jay Freeman on February 6th and 9th, 2015
19. 911 tapes and transcripts
20. ANSI Z21.13 editions from 1991 through 2014
21. ULC S636-2008
22. ULC S636-1995
23. Photos taken by fire department
24. Document production by Wyoming Mechanical, Bates nos. 1-17
25. Weather data on January 30, 2015 from station KJAC, from wunderground.com
26. Google Earth images
27. Written statement by David Schuler dated 02/06/2015
28. Emails among Greg Buckingham, David Schuler, and Dave Gieck

B E R K E L E Y R E S E A R C H C O M P A N Y

CURRICULUM VITAE OF

BERNARD R. CUZZILLO, Ph.D., P.E., C.F.I.

PRESIDENT, MECHANICAL ENGINEER, AND FIRE SCIENTIST

BERNARD R. CUZZILLO, PH.D., P.E.
BERNARD@BERKELEYRC.COM
CELL PHONE 510.821.2499

AREAS OF CONSULTATION:

Fire and Thermal Sciences:

Fire causation in vehicles, appliances, and machines
Thermal and emissions testing
Wood ignition and "pyrophoric carbon"
Combustion systems
CO exposure reconstruction
Heat transfer analysis

Mechanical Engineering:

Performance testing and analysis of electromechanical devices and systems.
Laboratory & field testing
Microprocessor-based systems
Advanced demonstrative evidence
Failure analysis

EDUCATION

- 1997 U.C. Berkeley, Mechanical Engineering, Ph.D.
Dissertation topic: Accidental ignition of wood due to self-heating, or "pyrophoric carbon."
Major field: Combustion. ME minors: Control systems and heat transfer. Outside minor: Mathematics.
- 1982 U.C. Berkeley, Mechanical Engineering, M.S.
Master's project topic: Laser absorption spectroscopy in a laboratory engine simulator.
Course work emphasis on thermosciences.
- 1980 U.C. Berkeley, Mechanical Engineering, B.S.
Course work emphasis in thermosciences.

AWARDS AND HONORS

- 2000, 2007 Co-Chairman of seminars, Society of Forensic Engineers and Scientists.
- 1998-2003 Invited lecturer in Mechanical Engineering 290F, a graduate class entitled Case Studies in Fire Safety Engineering Science, University of California at Berkeley.
- 1999 Jack Bono Engineering Communications Award, awarded by the Society of Fire Protection Engineers, Educational and Scientific Foundation, for contributions to The SFPE's *Journal of Fire Protection Engineering*.

PROFESSIONAL EXPERIENCE

- 2006-Present Founder, Berkeley Research Company (BRC)
- 1991-2006 Co-Founder, Berkeley Engineering And Research, Inc. (BEAR)
A California Corporation offering services encompassing mechanical engineering, fire science, and related disciplines.
- 1988-Present Mechanical Engineering Consultant
Consulting and expert witness testimony in Mechanical Engineering and Fire Science. 40+ trial appearances; 70+ depositions.

- 1987 - 1989 Graduate Student Instructor, U.C. Berkeley
Principal teaching assistant in two graduate classes and a two-week intensive course for professors: ME 230 Real-Time Applications of Mini- and Micro-Computers, and ME 235 Switching Control and Computer Interfacing, and Software for Microprocessor-Based Systems. Responsibilities included laboratory setup and management, report grading, individual instruction, troubleshooting student projects, and substitute lecturing.
- 1980 - 1987 Research Engineer, Chevron Research Company, Richmond, CA
Technical Engineering: Experimental design and systems design engineering of laboratory engine test facilities. Technical specialties included experimental design, instrumentation and electronics, C-language real-time computer programming, computer operations with experimental data from acquisition and verification to statistical analysis, mechanical design, and process design.
Project Management: Responsibilities included proposal creation and preparation, planning and coordination, budgeting, formulation of experimental methodology, specification writing, report writing, and oral presentations of technical findings.
Communication: Extensive technical writing and oral presentations. Company representation at technical society meetings. Editor of a weekly management update highlighting recent technical developments.
Supervision: Sole supervisor of research technicians and technical advisor to mechanical and electrical engineers, computer programmers, machinists, and mechanics. Responsible for performance appraisals.
- 1981 - 1982 Research Assistant, Lawrence Berkeley Laboratory, U.C. Berkeley
Designed and built a laser absorption system and a transient fuel delivery system for temporal/spatial mapping of hydrocarbons in a laboratory engine.
- 1977 - 1981 Automotive Mechanic/Driver Supervisor, U.C. Central Garage, Berkeley, CA
Created a student mechanic program. Performed all mechanical services on a variety of cars, trucks and buses. Designed and built diesel injector testing equipment. Responsible for functioning of campus shuttle bus service, including driver training and supervision.
- Summer '79 Student Engineer, Hughes Aircraft Company, Los Angeles, CA
Designed hardware and electrical circuits for radar test equipment for the F-18 fighter.

PROFESSIONAL AFFILIATIONS, LICENSE, AND CERTIFICATE

Registered Mechanical Engineer, State of California, #M26633

ASM International

National Fire Protection Association

International Association of Arson Investigators, Certified Fire Investigator, IAAI-CFI #22-060474

American Soc. of Mech. Engineers

Society of Automotive Engineers

Society of Forensic Engineers and Scientists

REPRESENTATIVE PROJECTS

- Design and development of a functioning spark- and injection-timing exhibit for courtroom demonstration.
- Invention and development of a method for ultra-low-disturbance hydraulic brake pressure measurement.
- Development of CO-Carboxyhemoglobin reconstruction software.
- Development of a NO→NO₂ model for ice rinks.
- Intrinsic thermocouple thermometry of natural gas burners.
- Precision testing of compressed-gas burst discs with custom tooling.
- Laboratory studies of fire-mediated electrical arcing.
- High-speed video of circuit breaker internals during over-current tripping.
- Development of a high-volume document digitization system producing superior-quality, extremely compact, and highly usable files.

SELECTED LABORATORY AND FIELD CAPABILITIES

- Microscopy laboratory including SEM, EDS, Stereo optical, Compound optical, PL, BF, DF, DIC, sensitive tint, epi- and trans-illumination. All with photomicrographic capabilities.
- Machine shop.
- Helium leak testing of systems and components.
- Circuit breaker calibration testing.
- High-accuracy surface temperature studies. Thermostat calibration testing.
- Electrical event testing.
- Automotive inspection and service facility, including hoist. In-depth hydraulic brake testing.
- Propane and natural gas emissions and leak testing.
- Ignition characterization of self-heating materials.
- Mobile 5-gas measurement of exhaust and flue gas components.

PUBLICATIONS AND PRESENTATIONS

Cuzzillo, Bernard R., Low-Temperature Wood Ignition, presented Feb. 2, 2005 at winter meeting of the California Conference of Arson Investigators.

Cuzzillo, B.R. and Pagni, P.J., Portions of the self-heating to ignition (popularly known as "spontaneous combustion") section of NFPA 921, *Guide for Fire and Explosion Investigations*, 2004 to 2014 editions.

Packham, S.C., Cuzzillo, B.R. and Purser, D.A., Calculating blood carboxyhemoglobin levels associated with the respiratory elimination of carbon monoxide, forthcoming.

Cuzzillo, B. R., Pagni, P.J., Williamson, R.B. and Schroeder, R.A., "The Verdict Is In: Pyrophoric Carbon Is Out," *Fire and Arson Investigator*, October 2002.

Hysert, D.W., White, J.W. Jr., Cuzzillo, B.R. and Garden, S.W., "Fire loss prevention, self-heating, and spontaneous combustion of hops," 115th Convention of the Master Brewers Association of the Americas, 2002.

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FEES AND TERMS

\$450 per hour plus expenses for consulting, including travel and waiting. 2%/month late payment fee after 30 days. Laboratory fees are additional as are assistant and associate fees. Minimum fee per case is \$1000. Name or resume may not be used without specific approval and payment of retainer. Fees may be required in advance. A retainer deposit is required, to be applied to final invoice.

Federal EIN [REDACTED]

July 22, 2014

BRC46.indd

BERKELEY
RESEARCH
COMPANY

RULE 26 CASE LIST

BERNARD R. CUZZILLO, PH.D, P.E.

PRESIDENT, MECHANICAL ENGINEER AND FIRE SCIENTIST

NOVEMBER 4, 2015

LEXINGTON INSURANCE COMPANY V. PROBUILT PROFESSIONAL PRODUCTS, LLC
CA SUPERIOR COURT FOR ALAMEDA COUNTY

LAWRENCE CLARE V. BRYAN MASTERSON ENTERPRISES
CA SUPERIOR COURT FOR SAN FRANCISCO CASE No. CGC-14-540810

RONNIE BUSH, ET AL. V. PACIFIC LPG CORP, ET AL.
CA SUPERIOR COURT FOR MONTEREY COUNTY CASE No. M111747

BEERLI, ET AL. V. WHIRLPOOL ARGENTINA S.A., ET AL.
CA SUPERIOR COURT FOR SANTA CLARA COUNTY CASE No.: 112CV225257

NATIONAL MUTUAL INSURANCE CO. V. JOSH KLEIN CONSTRUCTION, INC., ET AL.
CA SUPERIOR COURT FOR COUNTY OF SOLANO CASE No.: FCS039509

LOVELLE ELAINE JONES V. J.L. MALFITANO, INC.
CA SUPERIOR COURT FOR ALAMEDA COUNTY CASE No.:RG12613515

AMBER NICOLE LOMPE V. SUNRIDGE PARTNERS, LLC
UNITED STATES DISTRICT COURT FOR THE DISTRICT OF WYOMING
CIVIL ACTION No.: 12 CV 088 J

GARRETT PROCKNOW V. WABASH PRODUCTS, INC.
CA SUPERIOR COURT FOR THE COUNTY OF SAN FRANCISCO CASE No.: CGC-11-
511648

MONTOKA, ET AL. V. DiFIORE, ET AL.
CA SUPERIOR COURT FOR MADERA COUNTY CASE No. MCV056250

QUEVEDO ET AL. V. HARRIS FRESH, ET AL.
CA SUPERIOR COURT FOR FRESNO COUNTY No. 09CECG01486 AMS CONSOLIDAT-
ED WITH No. 09CECG00071

RULE 26 CASE LIST

BERNARD R. CUZZILLO, PH.D, P.E.

LARREA V. SELECT PROPERTY MANAGEMENT, INC., ET AL.

CA SUPERIOR COURT FOR SACRAMENTO COUNTY CASE No. 34-2011-00100809

CHAVEZ, ET AL. V. BAKER, ET AL.

CA SUPERIOR COURT FOR SACRAMENTO COUNTY CASE No. 34-2010-00086176

NATIONWIDE MUTUAL FIRE INSURANCE COMPANY V. BLAINE, ET AL.

CA SUPERIOR COURT FOR MERCED COUNTY No. CU151403

DAVID CAMPBELL; GERALD LOVELL AND CHERYL LOVELL V. DUANE MARTIN LIVE-STOCK, D2 TRAILER SALES AND SERVICE, INC.; COATES TIRE CENTER; LES SCHWAB, INC.; LES SCHWAB TIRE CENTERS OF CALIFORNIA, INC.

CA SUPERIOR COURT FOR SACRAMENTO COUNTY CASE No. 34-2009-00035911


SCOTTSDALE WATERFRONT RESIDENCIES CONDOMINIUM ASSOCIATION V. WATER-FRONT RESIDENCIES, LLC, OWR DEVELOPMENT INC., OWR CONSTRUCTION, INC. AZ, PRIVATE ARBITRATION BEFORE JAMS, COUNTY OF MARICOPA JAMS No. 1200042800

KATHLEEN AND THOMAS LOVE V. JEFFREY MAXWELL, ET AL

CA SUPERIOR COURT FOR STANISLAUS COUNTY CASE No. 370100

**JIM SONDGEROTH,
MASTER PLUMBER**

ATTACHMENTS

	Town of Jackson Certificate of Qualification	Certificate #	96
James A. Sondgeroth is hereby certified by the			
Town of Jackson to work as a		Master	
in the Plumbing			trade.
Expiration Date	10/21/2017	Date of Birth	
This card must be in your possession at all times while working in this trade within the Town of Jackson.			

RICK HIRSCHI, PH.D.

ATTACHMENTS

RICK L. HIRSCHI, PH.D.
ECONOMIC CONSULTANT
1763 N. 3000 W.
REXBURG, IDAHO 83440

Preliminary Report

November 2, 2015

David G. Lewis
Attorney at Law
P.O. Box 8519
Jackson Hole, WY
83002

RE: Monica Herrera

Dear Mr. Lewis:

I have completed my evaluation of the economic losses caused by the wrongful death of Monica Herrera due to carbon monoxide poisoning on January 30, 2015. These losses include the complete loss of her normal capacity to earn and the associated benefits; and the complete loss of her normal capacity to provide typical household services. The estimates of wage losses and associated benefits have been reduced by the estimated value of her personal consumption had she lived. Medical and funeral expenses associated with her death have not been computed, but should be accounted for prior to any settlement or trial date.

All values have been computed as of December 1, 2015. On this date, it is my opinion that the present value of the economic losses created as the result of Ms. Herrera's untimely death is \$1,126,253.

Documents reviewed along with facts and assumptions upon which my estimates of economic loss were based are outlined below.

Documents and Other Evidence Reviewed

1. Complaint and Demand for Jury Trial, August 4, 2015.
2. W-2 Wage and Tax Statement, Monica Herrera, 2011-2014.
3. U.S. Individual Income Tax Return, Francisco and Monica Herrera, 2011-2014.
4. List of Family Members of Monica Herrera.

Preliminary Report

Monica Herrera, page 2

5. Obituary of Monica Herrera, Teton Valley News, February 9, 2015.
6. Email from Joanna Herrera, October 30, 2015.
7. Secondary Market Yields on 3-month U.S. Treasury Bills 1990-2014, Federal Reserve Bank of the U.S., January 2015.
8. Annual rates of change in the Consumer Price Index 1990-2014, U.S. Department of Labor, Bureau of Labor Statistics, January 2015.
9. Annual rates of change in wages for all U.S. private sector workers 1990-2014, U.S. Department of Labor, Bureau of Labor Statistics, Establishment Hours and Earnings, January 2015.
10. U.S. Department of Labor, Employer Costs for Employee Compensation – September 2014, USDL-14-2208, December 10, 2014.
11. Table 12, Life Tables for Hispanic Females, 2010, National Vital Statistics Reports, Vol. 63, No. 7, November 6, 2014.
12. U.S. Department of Labor, American Time Use Survey – 2013 Results, USDL 14-1137, June 18, 2014.
13. Gary R. Skoog, James E. Ciecka, and Kurt V. Krueger, Table 22, “The Markov Process Model of Labor Force Activity: Extended Tables of Central Tendency, Shape, Percentile Points and Bootstrap Standard Errors,” Journal of Forensic Economics 22(2), 2011, pp. 165-229.
14. Consumer Expenditures, 2013, U.S. Bureau of Labor Statistics, Bulletin USDL-14-1671, September 9, 2014.

Facts and Computational Assumptions

1. Ms. Herrera died of carbon monoxide poisoning on January 30, 2015 when housekeeping at the residence located at 8935 E. Ditch Creek Road (Complaint).
2. Ms. Herrera was born on [REDACTED], making her attained age 47.23 on the date of the incident. According to the National Statistics Report her normal expected age of death would have been 85.42, based on her race, gender and age at the time of death (Life Tables for Hispanic Females, National Vital Statistics Reports).
3. Ms. Herrera is survived by her husband, Francisco, her two daughters: Frances and Joanna, her son: F [REDACTED], her mother, Juanita, and her grandchildren. In addition, two of Ms. Herrera’s young nieces: T [REDACTED] and A [REDACTED] L [REDACTED] resided with her (List of Family Members, Obituary).

Preliminary Report

Monica Herrera, page 3

4. Ms. Herrera highest level of education was a high school diploma (Joanna Herrera).
5. Because of her death, Ms. Herrera's estate has sustained a complete loss of her past and future capacity to earn and the associated employer paid fringe benefits. These loss computations are based on the following facts and assumptions.
 - a. Ms. Herrera had worked as a housekeeper at St. John's Medical Center (Teton County Hospital District) in Jackson, Wyoming for twenty years. Her average salary over the four years previous to her death was \$36,250 (Obituary; W-2 Wage and Tax Statements, 2011-2014).
 - b. Ms. Herrera also earned an estimated \$5,400 per year cleaning homes in the area (Joanna Herrera).
 - c. In addition to her normal earnings at the Teton County Hospital District, Ms. Herrera would have been expected to participate in the fringe benefits program paid by her employer. Her W-2 forms indicate that Ms. Herrera was enrolled in the hospitals retirement plan. Based on data published by the U.S. Department of Labor, individuals employed in the service-providing sector receive legally-required and retirement benefits that have an average employer cost equal to 18.27 percent of their dollar wage (U.S. Department of Labor, Employer Cost of Employee Compensation – September 2014, December 10, 2014).
 - d. Based on research by Gary R. Skoog, James E. Ciecka, and Kurt V. Krueger, Ms. Herrera would have been expected to work an additional 14.06 years beyond the date of the incident, based on her age, gender and level of education (Skoog, et al.).
 - e. Accounting for the fact that Ms. Herrera lived with her husband and two nieces, the portion of her income she would been expected to consume was estimated based on Consumer Expenditure data published by the U.S. Bureau of Labor Statistics.
6. Ms. Herrera's death has caused a complete loss of the value of the household services normally provided by her. The economic value of this loss has been estimated as follows:
 - a. The number of hours that Ms. Herrera normally had the capacity to provide to such services has been estimated based on data contained in Table 3 of the American Time Use Survey published annually by the Bureau of Labor Statistics. (American Time Use Survey – 2013 Results). Those hourly estimates vary from year to year as a function of age, and are shown Tables 10 and 11.

The hourly value of that work has been estimated to be equal to a weighted average hourly composite rate based on both (1) the number of average hours spent each day in providing the types of services summarized in Table 1 of the

Preliminary Report

Monica Herrera, page 4

ATUS; and (2) hourly wage rates for each type of service reported by the Bureau of Labor Statistics.

Computational Methodology

Losses of future income, benefits, and household services are shown in constant 2015 dollars. These future losses are discounted to the present value using the net discount rate which accounts for the expected growth rate of the particular loss, discounted by 3.04%, the average return on U.S. Treasury bills, with 3-month maturities, over the 25 years 1990-2014 (see Table 1). This methodology yields exactly the same results obtained by inflating annual losses, then discounting those losses to present value at the expected T-bill return. The net discount rate used in all computations is calculated using the formula:

$$d = \frac{(1+i)}{(1+g)} - 1$$

where d = the net discount rate,

i = the 25-year average return on T-bills, and

g = the expected annual growth rate of loss being analyzed.

Computation and Summary of Losses

Based on foundational materials and computational assumptions cited above, the values of economic losses caused by Monica Herrera's death are as follows:

1. The losses of Ms. Herrera's earnings capacity sustained between the date of the incident and the date of analysis, net of her estimated personal consumption of those earnings, are estimated in Tables 2 and 3. These losses total \$28,843 from Teton County Hospital District and \$4,297 from house cleaning.
2. Based on the fringe benefit cost data above and the earnings estimates made in Table 2, estimates of Ms. Herrera's past fringe benefit losses, net of her personal consumption, are shown in Table 4 and have a value of \$5,268.
3. The present values of Ms. Herrera's loss of future income are summarized in Tables 5 and 6. The present value of her loss of regular earnings from Teton County Hospital District is \$370,869 and the present value of her loss of future earnings from house cleaning is \$55,247. Both present values of losses have accounted for the estimated value of Ms. Herrera's personal consumption of that income, had she lived.
4. Ms. Herrera's estimated future fringe benefits from her work at the Teton County Hospital District, net of her personal consumption, are shown in Table 7 and have a present value of \$67,740.

Preliminary Report

Monica Herrera, page 5

5. The loss of household services normally provided by Ms. Herrera, from the date of the incident to the date of analysis, is computed in Table 10. This loss totals \$14,433.
6. The present value of future household services normally provided by Ms. Herrera is shown in Table 11 and totals \$579,557.

Based on each of the facts and assumptions explained above, it is my opinion that the estate of Monica Herrera has suffered economic losses of \$1,126,253 as a result of her death. The losses comprising this total are summarized in Table 12.

If you have questions regarding this report or the attached tables, please call.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick L. Hirschi", written in a cursive style.

Rick L. Hirschi

Table number:	1
Table title:	Interest rates, wage growth, and consumer price indices
Years:	1990-2014

Year	Interest Rates, 3-Month Treasury Bills ¹	Percentage Change in U. S. Private Sector Wages ²	Percentage Change in Consumer Price Index ³
1990	7.50%	4.10%	5.40%
1991	5.38%	3.00%	4.20%
1992	3.43%	2.50%	3.00%
1993	3.00%	2.60%	3.00%
1994	4.25%	2.60%	2.60%
1995	5.49%	2.70%	2.80%
1996	5.01%	3.30%	3.00%
1997	5.06%	3.90%	2.30%
1998	4.78%	4.00%	1.60%
1999	4.64%	3.70%	2.20%
2000	5.82%	3.90%	3.40%
2001	3.40%	3.70%	2.80%
2002	1.61%	3.00%	1.60%
2003	1.01%	2.70%	2.30%
2004	1.37%	2.10%	2.70%
2005	3.15%	2.70%	3.40%
2006	4.73%	3.90%	3.20%
2007	4.36%	4.00%	2.80%
2008	1.37%	3.70%	3.80%
2009	0.15%	3.00%	-0.40%
2010	0.14%	2.40%	1.60%
2011	0.05%	2.00%	3.20%
2012	0.09%	1.50%	2.10%
2013	0.06%	2.00%	1.50%
2014	0.03%	2.30%	1.60%
25-Year Average Growth Rates	3.04%	3.01%	2.63%

¹ Federal Reserve Bank of the U.S., Interest Rate Data Web Page, January 2015.

² U. S. Department of Labor, Web Establishment Hours and Earnings Data Retrieval Page, January 2015.

³ U. S. Department of Labor, Web CPI Data Retrieval Page, January 2015.

Table number:	2	
Table title:	Estimated wage losses from Teton County Hospital District, net of personal consumption, date of incident causing death through date of analysis	
Beginning & ending dates of loss:	1/30/2015	12/1/2015
Beginning & ending ages of loss:	47.23	48.07
Date of computation:	12/1/2015	
Year of computation:	2015	
Expected normal annual wage, first and last year:	\$36,250	\$36,250
Fraction of first year's income lost:	91.78%	
Elapsed years, 01/30/2015 to 12/01/2015	0.84	

Year	Age on Date of the Incident	Expected Normal Wage Multiplier	Estimated Normal Annual Income ¹	Fraction of Earnings Consumed Personally ²	Estimated Consumption of Personal Income	Estimated Annual Wage Loss, Net of Consumption
2015	47.23	1.00	\$33,271	13.31%	\$4,427	<u>\$28,843</u>
Total wage loss, 01/30/2015 to 12/01/2015						<u>\$28,843</u>

¹ Fraction of first year's lost income

² See computation of fraction of earnings personally consumed in Table 9

Table number:	3
Table title:	Estimated wage losses from house cleaning, net of personal consumption, date of incident causing death through date of analysis
Beginning & ending dates of loss:	1/30/2015 12/1/2015
Beginning & ending ages of loss:	47.23 48.07
Date of computation:	12/1/2015
Year of computation:	2015
Expected normal annual wage, first and last year:	\$5,400 \$5,400
Fraction of first year's income lost:	91.78%
Elapsed years, 01/30/2015 to 12/01/2015	0.84

Year	Age on Date of the Incident	Expected Normal Wage Multiplier	Estimated Normal Annual Income ¹	Fraction of Earnings Consumed Personally ²	Estimated Consumption of Personal Income	Estimated Annual Wage Loss, Net of Consumption
2015	47.23	1.0000	\$4,956	13.31%	\$660	\$4,297

Total wage loss, 01/30/2015 to 12/01/2015

\$4,297

¹ Fraction of first year's lost income

² See computation of fraction of earnings personally consumed in Table 9

Table number:	4
Table title:	Estimated losses of capacity to earn fringe benefit, date of incident causing death through date of analysis
First and last dates of loss:	1/30/2015 12/1/2015
First and last ages of loss:	47.23 48.07
Date of computation:	12/1/2015
Year of computation:	2015
Normal benefit to wage ratios:	18.27%
Elapsed years, 01/30/2015 to 12/01/2015	0.84

Year	Age on Date of the Incident	Estimated Normal Fringe Benefits	Fraction of Benefits Used Personally ¹	Estimated Personal Use of Benefits	Estimated Annual Benefit Loss, Net of Personal Use
2015	47.23	\$6,077	13.31%	\$809	<u>\$5,268</u>
Total fringe benefit loss, 01/30/2015 to 12/01/2015					<u><u>\$5,268</u></u>

¹ See computation of fraction of benefits personally consumed in Table 9

Table number:	5
Table title:	Present value of future losses of capacity to earn from Teton County Hospital District, date of analysis through date of normal retirement
Date of computation:	12/1/2015
Discount rate:	3.04%
First and last ages of normal income:	48.07 61.29
Last year of normal income	2029
Expected normal wage, growth rate & net discount rate:	\$36,250 3.01% 0.02%
Fraction of first & last year's normal income lost:	8.49% 13.70%

Year	Age on January First of Each Year ¹	Estimated Normal Annual Capacity to Earn	Fraction of Earnings Capacity Consumed Personally ²	Estimated Personal Consumption of Capacity to Earn	Estimated Annual Loss of Capacity to Earn, Net of Personal Consumption
2015	48.07	\$3,079	13.31%	\$410	\$2,669
2016	48.15	36,250	13.31%	4,824	31,426
2017	49.15	36,250	13.31%	4,824	31,426
2018	50.15	36,250	17.74%	6,432	29,818
2019	51.15	36,250	17.74%	6,432	29,818
2020	52.15	36,250	17.74%	6,432	29,818
2021	53.15	36,250	26.61%	9,648	26,602
2022	54.15	36,250	26.61%	9,648	26,602
2023	55.15	36,250	26.61%	9,648	26,602
2024	56.15	36,250	26.61%	9,648	26,602
2025	57.15	36,250	26.61%	9,648	26,602
2026	58.15	36,250	26.61%	9,648	26,602
2027	59.15	36,250	26.61%	9,648	26,602
2028	60.15	36,250	26.61%	9,648	26,602
2029	61.15	4,966	26.61%	1,322	3,644

Present value of normal capacity to earn, net of personal consumption

\$370,869

¹ Except for the first year of the analysis, when the age shown is the age on the date of analysis.

² See computation of fraction of earnings personally consumed in Table 9

Table number:	6
Table title:	Present value of future losses of capacity to earn from house cleaning, date of analysis through date of normal retirement
Date of computation:	12/1/2015
Discount rate:	3.04%
First and last ages of normal income:	48.07 61.29
Last year of normal income	2029
Expected normal wage, growth rate & net discount rate:	\$5,400 3.01% 0.02%
Fraction of first & last year's normal income lost:	8.49% 13.70%

Year	Age on January First of Each Year ¹	Estimated Normal Annual Capacity to Earn	Fraction of Earnings Capacity Consumed Personally ²	Estimated Personal Consumption of Capacity to Earn	Estimated Annual Loss of Capacity to Earn, Net of Personal Consumption
2015	48.07	\$459	13.31%	\$61	\$398
2016	48.15	5,400	13.31%	719	4,681
2017	49.15	5,400	13.31%	719	4,681
2018	50.15	5,400	17.74%	958	4,442
2019	51.15	5,400	17.74%	958	4,442
2020	52.15	5,400	17.74%	958	4,442
2021	53.15	5,400	26.61%	1,437	3,963
2022	54.15	5,400	26.61%	1,437	3,963
2023	55.15	5,400	26.61%	1,437	3,963
2024	56.15	5,400	26.61%	1,437	3,963
2025	57.15	5,400	26.61%	1,437	3,963
2026	58.15	5,400	26.61%	1,437	3,963
2027	59.15	5,400	26.61%	1,437	3,963
2028	60.15	5,400	26.61%	1,437	3,963
2029	61.15	740	26.61%	197	543

Present value of normal capacity to earn, net of personal consumption \$55,247

¹ Except for the first year of the analysis, when the age shown is the age on the date of analysis.

² See computation of fraction of earnings personally consumed in Table 9

Table number:	7
Table title:	Present value of future losses of capacity to earn employer-paid fringe benefits, date of analysis through date of normal retirement
Date of computation:	12/1/2015
Discount rate:	3.04%
First and last ages of normal benefits:	48.07 61.29
Last year of normal benefits:	2029
Fraction of first and last year's normal benefits lost:	8.49% 13.70%
Normal benefit to wage ratios:	18.27%
Net discount rate, normal benefits:	0.02%

Year	Age on January First of Each Year ¹	Expected Uninflated Normal Benefit	Fraction of Benefits Used Personally ²	Estimated Personal Use of Benefits	Estimated Annual benefit Loss, Net of Personal Use
2015	48.07	\$562	13.31%	\$75	\$488
2016	48.15	6,621	13.31%	881	5,740
2017	49.15	6,621	13.31%	881	5,740
2018	50.15	6,621	17.74%	1,175	5,446
2019	51.15	6,621	17.74%	1,175	5,446
2020	52.15	6,621	17.74%	1,175	5,446
2021	53.15	6,621	26.61%	1,762	4,859
2022	54.15	6,621	26.61%	1,762	4,859
2023	55.15	6,621	26.61%	1,762	4,859
2024	56.15	6,621	26.61%	1,762	4,859
2025	57.15	6,621	26.61%	1,762	4,859
2026	58.15	6,621	26.61%	1,762	4,859
2027	59.15	6,621	26.61%	1,762	4,859
2028	60.15	6,621	26.61%	1,762	4,859
2029	61.15	907	26.61%	241	666
Present value of losses of normal fringe benefits, net of personal consumption					<u>\$67,740</u>

¹ Except for the first year of the analysis, when the age shown is the age on the date of analysis.

² See computation of fraction of benefits personally consumed in Table 9

Table number:	8
Table title:	Computation of percentage of income allocated to fixed and variable household expenditures ¹

Item	Nature of Cost	Percent of Household Income
Food	Variable	10.35%
Housing	Fixed	26.88%
Apparel and Services	Variable	2.51%
Transportation	Variable	14.12%
Health Care	Variable	5.69%
Entertainment	Variable	3.89%
Cash Contributions	Variable	2.88%
All Other Expenditures	Variable	5.12%
Personal insurance & pensions	Variable	8.67%
% of total income spent on household or personal items		80.11%
% of income allocated to variable expenses		53.23%
% of income allocated to fixed expenses		26.88%

¹ Consumer Expenditures, 2013, U. S. Bureau of Labor Statistics, Bulletin USDL-14-1671, September 9, 2014.

Table number:	9
Table title:	Computation of decedent's annual consumption of earnings and fringe benefits
Dates of death/normal retirement:	1/30/2015 2/20/2029
Date of computation:	12/1/2015
Year of retirement:	2029
Elapsed time, incident to analysis:	0.84

Year	Age	Number of Children Under Age 18, Plus Spouse	Percentage of Income Allocated to Variable Expenses	Fraction of Earnings Spent on Variable Expenses
2015	47.23	3	53.23%	13.31%
2016	48.15	3	53.23%	13.31%
2017	49.15	3	53.23%	13.31%
2018	50.15	2	53.23%	17.74%
2019	51.15	2	53.23%	17.74%
2020	52.15	2	53.23%	17.74%
2021	53.15	1	53.23%	26.61%
2022	54.15	1	53.23%	26.61%
2023	55.15	1	53.23%	26.61%
2024	56.15	1	53.23%	26.61%
2025	57.15	1	53.23%	26.61%
2026	58.15	1	53.23%	26.61%
2027	59.15	1	53.23%	26.61%
2028	60.15	1	53.23%	26.61%
2029	61.15	1	53.23%	26.61%

Table number:	10
Table title:	Estimated value lost capacity to provide household services between date of death and date of analysis
Beginning & ending dates of loss:	1/30/2015 12/1/2015
First and last ages of loss:	47.23 48.07
Date of computation:	12/1/2015
Year of computation:	2015
Hourly value of services, 2014: ³	\$10.17
Estimated hourly value, 2015:	\$10.41
Fraction of first/last year lost:	91.78%
Elapsed years, incident to analysis:	0.84

Year	Age	Daily Hours Spent in Household Service ¹	Annual Hours Spent in Household Service	Wage Deflation Factor ²	Hourly Value of Service ³	Annual Value Of Lost Services
2015	47	4.14	1,386.90	1.0000	\$10.41	<u>\$14,433</u>
Total lost capacity to provide household services, 01/30/2015 to 12/01/2015						<u>\$14,433</u>

¹ Extracted from Table 3, "Average hours per day spent in primary activities, American Time Use Survey--2013 Results, U.S. Department of Labor, Bureau of Labor Statistics, USDL 14-1137, June 18, 2014.

² Based on average annual rates of change in wages for all U.S. workers. See Table 1.

³ Average of 50th percentile hourly wage for maids and housekeepers, food preparation and serving occupations, landscaping and grounds keeping occupations, and child care occupations, Bureau of Labor Statistics, May, 2014.

Table number:	11	
Table title:	Present value of future loss of capacity to provide household services, date of analysis through date of normal death	
Beginning & ending dates of loss:	12/1/2015	4/7/2053
First and last ages of loss:	48.07	85.42
Normal year of death:	2053	
Hourly value of services, 2015	\$10.41	
Expected growth rate of hourly value ³	3.01%	
Fraction of first year lost:	8.49%	
Discount rate and net discount rate:	3.0352%	0.0225%

Year	Age	Daily Hours Spent in Household Service ¹	Annual Hours Spent in Household Service	Uninflated Hourly Value of Service ²	Uninflated Annual Value of Service
2015	48.07	4.14	128.34	\$10.41	\$1,336
2016	48.15	4.14	1,511.10	10.41	15,725
2017	49.15	4.14	1,511.10	10.41	15,725
2018	50.15	4.14	1,511.10	10.41	15,725
2019	51.15	4.14	1,511.10	10.41	15,725
2020	52.15	4.14	1,511.10	10.41	15,725
2021	53.15	4.14	1,511.10	10.41	15,725
2022	54.15	4.14	1,511.10	10.41	15,725
2023	55.15	4.01	1,463.65	10.41	15,231
2024	56.15	4.01	1,463.65	10.41	15,231
2025	57.15	4.01	1,463.65	10.41	15,231
2026	58.15	4.01	1,463.65	10.41	15,231
2027	59.15	4.01	1,463.65	10.41	15,231
2028	60.15	4.01	1,463.65	10.41	15,231
2029	61.15	4.01	1,463.65	10.41	15,231
2030	62.15	4.01	1,463.65	10.41	15,231
2031	63.15	4.01	1,463.65	10.41	15,231
2032	64.15	4.01	1,463.65	10.41	15,231
2033	65.15	4.19	1,529.35	10.41	15,915
2034	66.15	4.19	1,529.35	10.41	15,915
2035	67.15	4.19	1,529.35	10.41	15,915
2036	68.15	4.19	1,529.35	10.41	15,915
2037	69.15	4.19	1,529.35	10.41	15,915
2038	70.15	4.19	1,529.35	10.41	15,915
2039	71.15	4.19	1,529.35	10.41	15,915
2040	72.15	4.19	1,529.35	10.41	15,915
2041	73.15	4.19	1,529.35	10.41	15,915
2042	74.15	4.19	1,529.35	10.41	15,915
2043	75.15	3.81	1,390.65	10.41	14,472
2044	76.15	3.81	1,390.65	10.41	14,472
2045	77.15	3.81	1,390.65	10.41	14,472
2046	78.15	3.81	1,390.65	10.41	14,472
2047	79.15	3.81	1,390.65	10.41	14,472
2048	80.15	3.81	1,390.65	10.41	14,472
2049	81.15	3.81	1,390.65	10.41	14,472
2050	82.15	3.81	1,390.65	10.41	14,472
2051	83.15	3.81	1,390.65	10.41	14,472
2052	84.15	3.81	1,390.65	10.41	14,472
2053	85.15	3.81	1,390.65	10.41	14,472

Present value of future household service loss at net discount rate \$579,557

¹ Extracted from Table 3, "Average hours per day spent in primary activities, American Time Use Survey—2013 Results, U.S. Department of Labor, Bureau of Labor Statistics, USDL 14-1137, June 18, 2014..

² Average of 50th percentile hourly wage for maids and housekeepers, food preparation and serving occupations, landscaping and grounds keeping occupations, and child care occupations, Bureau of Labor Statistics, May, 2014.

³ Average annual rate of growth in hourly earnings of U.S. workers, 1988-2014. See Table 1.

Table number:	12
Table title:	Summary of Economic Losses
Date of analysis:	12/1/2015

Table Number	Nature of Loss	Present Value of Losses
2	Total past wage losses from Teton County Hospital District	\$28,843
3	Total past wage losses from house cleaning	4,297
4	Total past fringe benefit losses	5,268
5	Present value of future lost capacity to earn from Teton County Hospital District	370,869
6	Present value of future lost capacity to earn from house cleaning	55,247
7	Present value of future fringe benefit losses	67,740
10	Total past household service loss	14,433
11	Present value of future household service loss	<u>579,557</u>
	Total present value of economic losses on 12/01/2015	<u><u>\$1,126,253</u></u>

Foundational Documents

From: **Joanna Herrera** jlsusano@hotmail.com
Subject: **Monica & Nieces Info**
Date: October 30, 2015 at 2:34 PM
To: davelewis@bresnan.net

Hi David,

Monica's DOB is [REDACTED]

Highest Education was High School Diploma.

Her yearly extra income aside from the hospital was \$5,400 a year.

Her nieces that resided with Monica are:

[REDACTED]
[REDACTED]

Thanks,
Joanna Herrera

Series Description 3-month Treasury bill secondary market rate discount basis
Unit: Percent:_Per_Year
Multiplier: 1
Currency: NA
Unique Identifier: H15/H15/RIFSGFSM03_N.A
Time Period RIFSGFSM03_N.A

1990	7.50
1991	5.38
1992	3.43
1993	3.00
1994	4.25
1995	5.49
1996	5.01
1997	5.06
1998	4.78
1999	4.64
2000	5.82
2001	3.40
2002	1.61
2003	1.01
2004	1.37
2005	3.15
2006	4.73
2007	4.36
2008	1.37
2009	0.15
2010	0.14
2011	0.05
2012	0.09
2013	0.06
2014	0.03

Bureau of Labor Statistics

Consumer Price Index - All Urban Consumers
12-Month Percent Change

Series Id: CUUR0000SA0,CUUS0000SA0

Not Seasonally Adjusted

Area: U.S. city average

Item: All items

Base Period: 1982-84=100

Years: 1990 to 2014

Year	Annual
1990	5.4
1991	4.2
1992	3.0
1993	3.0
1994	2.6
1995	2.8
1996	3.0
1997	2.3
1998	1.6
1999	2.2
2000	3.4
2001	2.8
2002	1.6
2003	2.3
2004	2.7
2005	3.4
2006	3.2
2007	2.8
2008	3.8
2009	-0.4
2010	1.6
2011	3.2
2012	2.1
2013	1.5
2014	1.6

Bureau of Labor Statistics

**Employment, Hours, and Earnings from the Current
Employment Statistics survey (National)
12-Month Percent Change**

Series Id: CEU0500000008
 Not Seasonally Adjusted
 Super Sector: Total private
 Industry: Total private
 NAICS Code: -
 Data Type: AVERAGE HOURLY EARNINGS OF PRODUCTION
 AND NONSUPERVISORY EMPLOYEES
 Years: 1990 to 2014

Year	Annual
1990	4.1
1991	3.0
1992	2.5
1993	2.6
1994	2.6
1995	2.7
1996	3.3
1997	3.9
1998	4.0
1999	3.7
2000	3.9
2001	3.7
2002	3.0
2003	2.7
2004	2.1
2005	2.7
2006	3.9
2007	4.0
2008	3.7
2009	3.0
2010	2.4
2011	2.0
2012	1.5
2013	2.0
2014	2.3



NEWS RELEASE



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EMPLOYER COSTS FOR EMPLOYEE COMPENSATION – SEPTEMBER 2014

Employer costs for employee **compensation** for civilian workers averaged \$32.20 per hour worked in September 2014, the U.S. Bureau of Labor Statistics reported today. **Wages and salaries** averaged \$22.13 per hour worked and accounted for 68.7 percent of these costs, while **benefits** averaged \$10.07 and accounted for the remaining 31.3 percent. Total employer compensation costs for **private industry** workers averaged \$30.32 per hour worked in September 2014.

Employer Costs for Employee Compensation (ECEC), a product of the National Compensation Survey, measures employer costs for wages and salaries, and employee benefits for nonfarm private and state and local government workers.

Chart 1. Employer costs per hour worked for total compensation: selected major occupational groups, state and local government workers, September 2014

Cost per hour worked

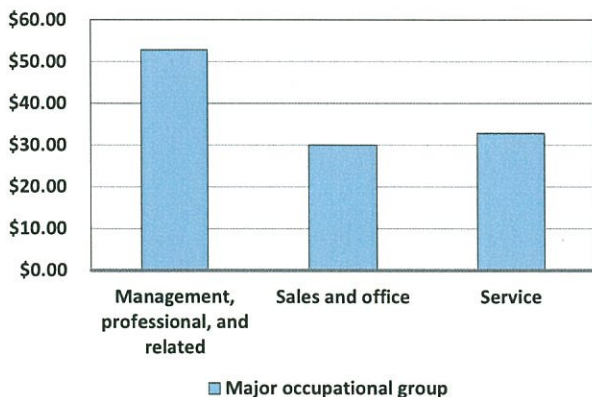
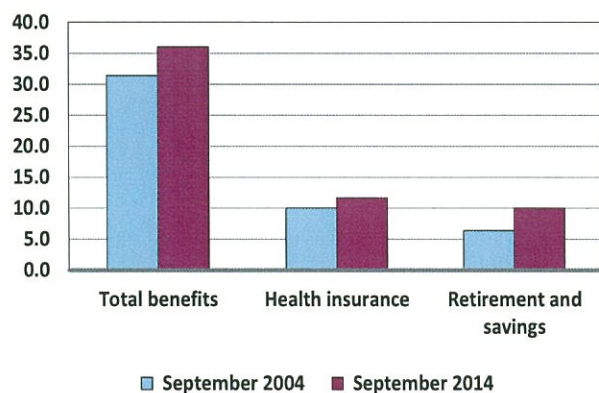


Chart 2. Employer costs as a percent of total compensation: total benefits, health insurance, and retirement and savings, state and local government workers, September 2004 and September 2014

Percent of total compensation



Compensation costs in state and local government

State and local government employers spent an average of \$43.56 per hour worked for employee compensation in September 2014. Wages and salaries averaged \$27.89 per hour and accounted for 64.0 percent of compensation costs, while benefits averaged \$15.67 per hour worked and accounted for the remaining 36.0 percent. Total compensation costs for management, professional, and related workers averaged \$52.88 per hour worked. This major occupational group includes teachers, averaging \$59.42

Table 1. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: Civilian workers, by major occupational and industry group, September 2014

Compensation component	Occupational group							
	All workers ¹		Management, professional, and related		Sales and office		Service	
	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent
Total compensation	\$32.20	100.0	\$53.38	100.0	\$24.02	100.0	\$16.80	100.0
Wages and salaries	22.13	68.7	36.74	68.8	16.83	70.1	11.97	71.2
Total benefits	10.07	31.3	16.65	31.2	7.19	29.9	4.83	28.8
Paid leave	2.25	7.0	4.32	8.1	1.54	6.4	0.88	5.2
Vacation	1.11	3.4	2.10	3.9	0.77	3.2	0.41	2.5
Holiday	0.68	2.1	1.25	2.3	0.48	2.0	0.28	1.7
Sick	0.34	1.0	0.71	1.3	0.21	0.9	0.14	0.8
Personal	0.13	0.4	0.26	0.5	0.09	0.4	0.05	0.3
Supplemental pay	0.79	2.4	1.26	2.4	0.53	2.2	0.29	1.7
Overtime and premium ⁴	0.25	0.8	0.13	0.2	0.14	0.6	0.16	0.9
Shift differentials	0.06	0.2	0.09	0.2	0.02	0.1	0.05	0.3
Nonproduction bonuses	0.48	1.5	1.04	1.9	0.36	1.5	0.08	0.5
Insurance	2.89	9.0	4.36	8.2	2.39	9.9	1.37	8.1
Life	0.04	0.1	0.08	0.1	0.03	0.1	0.02	0.1
Health	2.75	8.5	4.12	7.7	2.29	9.5	1.33	7.9
Short-term disability	0.05	0.2	0.08	0.1	0.04	0.2	(⁵)	(⁶)
Long-term disability	0.05	0.1	0.08	0.1	0.03	0.1	(⁵)	(⁶)
Retirement and savings	1.67	5.2	3.28	6.1	0.87	3.6	0.71	4.2
Defined benefit	1.06	3.3	2.06	3.9	0.43	1.8	0.58	3.5
Defined contribution	0.61	1.9	1.22	2.3	0.43	1.8	0.13	0.8
Legally required benefits	2.47	7.7	3.44	6.5	1.87	7.8	1.59	9.4
Social Security and Medicare	1.79	5.6	2.87	5.4	1.40	5.8	0.98	5.9
Social Security ⁷	1.43	4.4	2.26	4.2	1.13	4.7	0.79	4.7
Medicare	0.36	1.1	0.61	1.1	0.27	1.1	0.19	1.2
Federal unemployment insurance	0.03	0.1	0.03	(⁶)	0.04	0.2	0.04	0.2
State unemployment insurance	0.20	0.6	0.18	0.3	0.19	0.8	0.18	1.0
Workers' compensation	0.45	1.4	0.37	0.7	0.24	1.0	0.39	2.3

See footnotes at end of table.

Table 1. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: Civilian workers, by major occupational and industry group, September 2014 — Continued

Compensation component	Occupational group				Industry group			
	Natural resources, construction, and maintenance		Production, transportation, and material moving		Goods-producing ²		Service-providing ³	
	Cost	Percent	Cost	Percent	Cost	Percent	Cost	Percent
Total compensation	\$34.03	100.0	\$26.75	100.0	\$36.37	100.0	\$31.46	100.0
Wages and salaries	22.54	66.2	17.54	65.6	24.04	66.1	21.79	69.3
Total benefits	11.49	33.8	9.21	34.4	12.32	33.9	9.67	30.7
Paid leave	1.91	5.6	1.64	6.1	2.38	6.6	2.23	7.1
Vacation	0.96	2.8	0.84	3.2	1.26	3.5	1.08	3.4
Holiday	0.62	1.8	0.54	2.0	0.82	2.3	0.65	2.1
Sick	0.21	0.6	0.19	0.7	0.22	0.6	0.36	1.1
Personal	0.11	0.3	0.06	0.2	0.08	0.2	0.14	0.4
Supplemental pay	0.97	2.8	0.95	3.5	1.41	3.9	0.68	2.1
Overtime and premium ⁴	0.67	2.0	0.55	2.1	0.57	1.6	0.19	0.6
Shift differentials	0.05	0.1	0.08	0.3	0.08	0.2	0.06	0.2
Nonproduction bonuses	0.25	0.7	0.31	1.2	0.76	2.1	0.43	1.4
Insurance	3.19	9.4	2.99	11.2	3.46	9.5	2.79	8.9
Life	0.04	0.1	0.04	0.1	0.07	0.2	0.04	0.1
Health	3.03	8.9	2.83	10.6	3.25	8.9	2.66	8.5
Short-term disability	0.08	0.2	0.06	0.2	0.08	0.2	0.05	0.1
Long-term disability	0.04	0.1	0.07	0.3	0.05	0.1	0.04	0.1
Retirement and savings	2.17	6.4	1.10	4.1	1.95	5.4	1.62	5.2
Defined benefit	1.59	4.7	0.64	2.4	1.12	3.1	1.05	3.3
Defined contribution	0.58	1.7	0.46	1.7	0.83	2.3	0.57	1.8
Legally required benefits	3.25	9.5	2.53	9.4	3.12	8.6	2.36	7.5
Social Security and Medicare	1.90	5.6	1.50	5.6	2.05	5.6	1.74	5.5
Social Security ⁷	1.54	4.5	1.21	4.5	1.65	4.5	1.39	4.4
Medicare	0.37	1.1	0.29	1.1	0.40	1.1	0.36	1.1
Federal unemployment insurance	0.03	0.1	0.04	0.1	0.03	0.1	0.03	0.1
State unemployment insurance	0.27	0.8	0.23	0.9	0.27	0.8	0.19	0.6
Workers' compensation	1.04	3.1	0.76	2.8	0.76	2.1	0.39	1.3

¹ Includes workers in the private nonfarm economy excluding households and the public sector excluding the Federal government.

² Includes mining, construction, and manufacturing. The agriculture, forestry, farming, and hunting sector is excluded.

³ Includes utilities; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services, except public administration; and

public administration.

⁴ Includes premium pay for work in addition to the regular work schedule (such as overtime, weekends, and holidays).

⁵ Cost per hour worked is \$0.01 or less.

⁶ Less than .05 percent.

⁷ Comprises the Old-Age, Survivors, and Disability Insurance (OASDI) program.

Note: The sum of individual items may not equal totals due to rounding.

Table 12. Life table for Hispanic females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table12.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.004729	100,000	473	99,588	8,382,303	83.8
1-2	0.000354	99,527	35	99,510	8,282,715	83.2
2-3	0.000194	99,492	19	99,482	8,183,206	82.2
3-4	0.000153	99,473	15	99,465	8,083,724	81.3
4-5	0.000111	99,457	11	99,452	7,984,259	80.3
5-6	0.000096	99,446	10	99,442	7,884,807	79.3
6-7	0.000079	99,437	8	99,433	7,785,365	78.3
7-8	0.000069	99,429	7	99,425	7,685,932	77.3
8-9	0.000066	99,422	7	99,419	7,586,507	76.3
9-10	0.000068	99,416	7	99,412	7,487,088	75.3
10-11	0.000077	99,409	8	99,405	7,387,676	74.3
11-12	0.000089	99,401	9	99,397	7,288,271	73.3
12-13	0.000103	99,392	10	99,387	7,188,875	72.3
13-14	0.000118	99,382	12	99,376	7,089,488	71.3
14-15	0.000133	99,370	13	99,364	6,990,111	70.3
15-16	0.000149	99,357	15	99,350	6,890,748	69.4
16-17	0.000168	99,342	17	99,334	6,791,398	68.4
17-18	0.000188	99,325	19	99,316	6,692,064	67.4
18-19	0.000211	99,307	21	99,296	6,592,748	66.4
19-20	0.000236	99,286	23	99,274	6,493,452	65.4
20-21	0.000265	99,262	26	99,249	6,394,178	64.4
21-22	0.000293	99,236	29	99,222	6,294,929	63.4
22-23	0.000313	99,207	31	99,192	6,195,707	62.5
23-24	0.000323	99,176	32	99,160	6,096,515	61.5
24-25	0.000323	99,144	32	99,128	5,997,355	60.5
25-26	0.000323	99,112	32	99,096	5,898,227	59.5
26-27	0.000325	99,080	32	99,064	5,799,131	58.5
27-28	0.000328	99,048	33	99,031	5,700,068	57.5
28-29	0.000333	99,015	33	98,999	5,601,036	56.6
29-30	0.000341	98,982	34	98,965	5,502,037	55.6
30-31	0.000349	98,949	35	98,931	5,403,072	54.6
31-32	0.000361	98,914	36	98,896	5,304,141	53.6
32-33	0.000382	98,878	38	98,859	5,205,245	52.6
33-34	0.000415	98,841	41	98,820	5,106,385	51.7
34-35	0.000459	98,800	45	98,777	5,007,565	50.7
35-36	0.000510	98,754	50	98,729	4,908,788	49.7
36-37	0.000565	98,704	56	98,676	4,810,059	48.7
37-38	0.000622	98,648	61	98,617	4,711,383	47.8
38-39	0.000680	98,587	67	98,553	4,612,766	46.8
39-40	0.000742	98,520	73	98,483	4,514,212	45.8
40-41	0.000809	98,447	80	98,407	4,415,729	44.9
41-42	0.000888	98,367	87	98,323	4,317,322	43.9
42-43	0.000988	98,280	97	98,231	4,218,999	42.9
43-44	0.001115	98,183	109	98,128	4,120,768	42.0
44-45	0.001261	98,073	124	98,011	4,022,640	41.0
45-46	0.001417	97,949	139	97,880	3,924,628	40.1
46-47	0.001577	97,811	154	97,734	3,826,748	39.1
47-48	0.001744	97,656	170	97,571	3,729,015	38.2
48-49	0.001921	97,486	187	97,393	3,631,443	37.3
49-50	0.002107	97,299	205	97,196	3,534,051	36.3
50-51	0.002316	97,094	225	96,981	3,436,854	35.4
51-52	0.002536	96,869	246	96,746	3,339,873	34.5
52-53	0.002738	96,623	265	96,491	3,243,127	33.6
53-54	0.002903	96,359	280	96,219	3,146,636	32.7
54-55	0.003045	96,079	293	95,933	3,050,417	31.7
55-56	0.003182	95,787	305	95,634	2,954,484	30.8
56-57	0.003353	95,482	320	95,322	2,858,850	29.9
57-58	0.003588	95,162	341	94,991	2,763,528	29.0
58-59	0.003919	94,820	372	94,634	2,668,537	28.1
59-60	0.004335	94,449	409	94,244	2,573,903	27.3
60-61	0.004807	94,039	452	93,813	2,479,659	26.4
61-62	0.005310	93,587	497	93,339	2,385,846	25.5

32 National Vital Statistics Reports, Vol. 63, No. 7, November 6, 2014

Table 12. Life table for Hispanic females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table12.xlsx

	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
Age	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63.....	0.005849	93,090	545	92,818	2,292,508	24.6
63-64.....	0.006423	92,546	594	92,248	2,199,690	23.8
64-65.....	0.007047	91,951	648	91,627	2,107,441	22.9
65-66.....	0.007772	91,303	710	90,948	2,015,814	22.1
66-67.....	0.008601	90,594	779	90,204	1,924,866	21.2
67-68.....	0.009477	89,814	851	89,389	1,834,662	20.4
68-69.....	0.010353	88,963	921	88,503	1,745,273	19.6
69-70.....	0.011237	88,042	989	87,547	1,656,771	18.8
70-71.....	0.012156	87,053	1,058	86,524	1,569,223	18.0
71-72.....	0.013203	85,995	1,135	85,427	1,482,699	17.2
72-73.....	0.014462	84,859	1,227	84,246	1,397,272	16.5
73-74.....	0.016023	83,632	1,340	82,962	1,313,027	15.7
74-75.....	0.017892	82,292	1,472	81,556	1,230,065	14.9
75-76.....	0.019943	80,820	1,612	80,014	1,148,509	14.2
76-77.....	0.022163	79,208	1,755	78,330	1,068,495	13.5
77-78.....	0.024689	77,452	1,912	76,496	990,165	12.8
78-79.....	0.027586	75,540	2,084	74,498	913,669	12.1
79-80.....	0.030762	73,456	2,260	72,326	839,171	11.4
80-81.....	0.034114	71,197	2,429	69,982	766,844	10.8
81-82.....	0.037966	68,768	2,611	67,462	696,862	10.1
82-83.....	0.042470	66,157	2,810	64,752	629,400	9.5
83-84.....	0.047749	63,347	3,025	61,835	564,648	8.9
84-85.....	0.054184	60,323	3,269	58,688	502,813	8.3
85-86.....	0.061104	57,054	3,486	55,311	444,125	7.8
86-87.....	0.069014	53,568	3,697	51,719	388,814	7.3
87-88.....	0.077805	49,871	3,880	47,931	337,094	6.8
88-89.....	0.087538	45,991	4,026	43,978	289,164	6.3
89-90.....	0.098268	41,965	4,124	39,903	245,186	5.8
90-91.....	0.110042	37,841	4,164	35,759	205,283	5.4
91-92.....	0.122896	33,677	4,139	31,607	169,524	5.0
92-93.....	0.136851	29,538	4,042	27,517	137,917	4.7
93-94.....	0.151910	25,496	3,873	23,559	110,400	4.3
94-95.....	0.168054	21,623	3,634	19,806	86,840	4.0
95-96.....	0.185241	17,989	3,332	16,323	67,034	3.7
96-97.....	0.203404	14,657	2,981	13,166	50,712	3.5
97-98.....	0.222448	11,675	2,597	10,377	37,546	3.2
98-99.....	0.242253	9,078	2,199	7,979	27,169	3.0
99-100.....	0.262676	6,879	1,807	5,976	19,190	2.8
100 and over.....	1.000000	5,072	5,072	13,215	13,215	2.6



NEWS RELEASE



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AMERICAN TIME USE SURVEY — 2013 RESULTS

On an average day in 2013, employed adults living in households with no children under age 18 engaged in leisure activities for 4.5 hours, about an hour more than employed adults living with a child under age 6, the U.S. Bureau of Labor Statistics reported today. Nearly everyone age 15 and over (95 percent) engaged in some sort of leisure activity, such as watching TV, socializing, or exercising.

These and other results from the American Time Use Survey (ATUS) were released today. These data include the average amount of time per day in 2013 that individuals worked, did household activities, and engaged in leisure and sports activities. Additionally, measures of the average time per day spent providing childcare—both as a primary (or main) activity and while doing other things—for the combined years 2009-13 are provided. For a further description of ATUS data and methodology, see the Technical Note.

Working (by Employed Persons) in 2013

- Employed persons worked an average of 7.6 hours on the days they worked. More hours were worked, on average, on weekdays than on weekend days—7.9 hours compared with 5.5 hours. (See table 4.)
- On the days they worked, employed men worked 53 minutes more than employed women. This difference partly reflects women's greater likelihood of working part time. However, even among full-time workers (those usually working 35 hours or more per week), men worked longer than women—8.3 hours compared with 7.7 hours. (See table 4.)
- Many more people worked on weekdays than on weekend days: 83 percent of employed persons worked on an average weekday, compared with 34 percent on an average weekend day. (See table 4.)
- On the days they worked, 83 percent of employed persons did some or all of their work at their workplace and 23 percent did some or all of their work at home. They spent more time working at the workplace than at home—7.9 hours compared with 3.0 hours. (See table 6.)
- Multiple jobholders were more likely to work on an average day than were single jobholders—77 percent compared with 67 percent. (For a definition of average day, see the Technical Note.) Multiple jobholders also were more likely to work at home than were single jobholders—31 percent compared with 22 percent. (See table 6.)

Average Daily Hours Spent in Household Work, Men and Women, 2013¹

Characteristic	Average hours per day spent in primary activities												Daily Household Hours (Sum, Cols 3-6)	Annual Household Hours (Col 13 x 365)
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13	Col 14
Men, 15 years and over	9.31	1.26	1.34	0.63	0.36	0.17	4.20	0.47	0.29	5.61	0.10	0.27	2.50	912.50
15 to 19 years	10.47	1.00	0.75	0.44	0.12	0.11	1.13	3.09	0.25	6.19	0.14	na	1.42	518.30
20 to 24 years	9.48	1.22	0.66	0.44	0.10	0.17	4.42	1.13	0.20	5.63	0.08	na	1.37	500.05
25 to 34 years	9.07	1.27	1.08	0.64	0.54	0.13	5.55	(3.00)	0.18	4.84	0.06	0.16	2.39	872.35
35 to 44 years	8.97	1.23	1.33	0.66	0.88	0.17	5.88	0.05	0.24	4.33	0.05	0.21	3.04	1,109.60
45 to 54 years	9.09	1.19	1.45	0.64	0.38	0.19	5.37	0.05	0.29	4.98	0.08	0.28	2.66	970.90
55 to 64 years	9.21	1.27	1.69	0.65	0.14	0.14	4.34	na	0.22	5.89	0.13	0.30	2.62	956.30
65 to 74 years	9.22	1.48	2.08	0.71	0.12	0.31	1.49	na	0.60	7.57	0.14	0.28	3.22	1,175.30
75 years and over	9.91	1.56	1.56	0.82	0.07	0.12	0.79	na	0.54	8.13	0.18	0.31	2.57	938.05
Women, 15 years and over	9.76	1.20	2.19	0.86	0.69	0.22	2.77	0.48	0.36	4.94	0.19	0.35	3.96	1,445.40
15 to 19 years	10.52	1.08	0.75	0.56	0.19	0.25	0.96	3.74	0.30	5.01	0.27	0.38	1.75	638.75
20 to 24 years	10.35	1.20	1.23	0.83	0.69	0.19	2.91	0.98	0.22	4.82	0.11	na	2.94	1,073.10
25 to 34 years	9.71	1.16	1.97	0.88	1.53	0.15	3.76	0.34	0.23	3.77	0.12	0.37	4.53	1,653.45
35 to 44 years	9.57	1.10	2.35	0.87	1.41	0.09	3.80	0.14	0.30	3.92	0.14	0.32	4.72	1,722.80
45 to 54 years	9.56	1.13	2.47	0.88	0.54	0.25	3.98	0.06	0.37	4.33	0.16	0.26	4.14	1,511.10
55 to 64 years	9.41	1.25	2.55	0.90	0.23	0.33	2.95	na	0.37	5.52	0.20	0.28	4.01	1,463.65
65 to 74 years	9.51	1.35	2.77	0.92	0.13	0.37	0.86	na	0.53	6.75	0.33	0.45	4.19	1,529.35
75 years and over	10.29	1.40	2.71	0.91	0.06	0.13	0.11	na	0.64	7.03	0.32	0.38	3.81	1,390.65

¹ Data extracted from Table 3, time spent in primary activities for the civilian population by age, sex, race, Hispanic or Latino ethnicity, marital status, and educational attainment, 2013 annual averages. American Time Use Survey--20134 Results, U.S. Department of Labor, Bureau of Labor Statistics, USD L 14-1137, June 18, 2014.

Occupational Employment Statistics

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Occupational Employment and Wages, May 2012

39-9011 Childcare Workers

Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play. Excludes "Preschool Teachers, Except Special Education" (25-2011) and "Teacher Assistants" (25-9041).

[National estimates for this occupation](#)
[Industry profile for this occupation](#)
[Geographic profile for this occupation](#)

National estimates for this occupation: [Top](#)

Employment estimate and mean wage estimates for this occupation:

Employment (1)	Employment RSE (3)	Mean hourly wage	Mean annual wage (2)	Wage RSE (3)
624,520	1.0 %	\$10.25	\$21,310	0.6 %

Percentile wage estimates for this occupation:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$7.85	\$8.46	\$9.38	\$11.51	\$14.19
Annual Wage (2)	\$16,340	\$17,600	\$19,510	\$23,940	\$29,510

Industry profile for this occupation: [Top](#)

Industries with the highest published employment and wages for this occupation are provided. For a list of all industries with employment in this occupation, see the [Create Customized Tables](#) function.

Industries with the highest levels of employment in this occupation:

Industry	Employment (1)	Percent of industry employment	Hourly mean wage	Annual mean wage (2)
Child Day Care Services	297,850	37.00	\$9.48	\$19,710
Elementary and Secondary Schools	138,250	1.67	\$11.51	\$23,940
Other Amusement and Recreation Industries	34,480	3.18	\$9.56	\$19,880
Civic and Social Organizations	30,960	8.05	\$9.52	\$19,800
Other Residential Care Facilities	25,980	16.47	\$11.07	\$23,020

Industries with the highest concentration of employment in this occupation:

Industry	Employment	Percent of	Hourly	Annual
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Occupational Employment and Wages, May 2012

35-9099 Food Preparation and Serving Related Workers, All Other

All food preparation and serving related workers not listed separately.

[National estimates for this occupation](#)[Industry profile for this occupation](#)[Geographic profile for this occupation](#)National estimates for this occupation: [Top](#)

Employment estimate and mean wage estimates for this occupation:

Employment (1)	Employment RSE (3)	Mean hourly wage	Mean annual wage (2)	Wage RSE (3)
36,850	3.8 %	\$11.25	\$23,390	1.2 %

Percentile wage estimates for this occupation:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$8.10	\$8.72	\$9.76	\$13.13	\$17.10
Annual Wage (2)	\$16,850	\$18,130	\$20,300	\$27,320	\$35,570

Industry profile for this occupation: [Top](#)Industries with the highest published employment and wages for this occupation are provided. For a list of all industries with employment in this occupation, see the [Create Customized Tables](#) function.

Industries with the highest levels of employment in this occupation:

Industry	Employment (1)	Percent of industry employment	Hourly mean wage	Annual mean wage (2)
Restaurants and Other Eating Places	10,940	0.12	\$9.74	\$20,260
Traveler Accommodation	5,780	0.33	\$12.32	\$25,630
Special Food Services	3,710	0.63	\$11.11	\$23,110
General Medical and Surgical Hospitals	2,700	0.05	\$13.20	\$27,460
Elementary and Secondary Schools	2,580	0.03	\$12.12	\$25,200

Industries with the highest concentration of employment in this occupation:

Industry	Employment (1)	Percent of industry employment	Hourly mean wage	Annual mean wage (2)
Special Food Services	3,710	0.63	\$11.11	\$23,110

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Occupational Employment and Wages, May 2012

37-2012 Maids and Housekeeping Cleaners

Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels and hospitals, in a clean and orderly manner. Duties may include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.

[National estimates for this occupation](#)[Industry profile for this occupation](#)[Geographic profile for this occupation](#)National estimates for this occupation: [Top](#)

Employment estimate and mean wage estimates for this occupation:

Employment (1)	Employment RSE (3)	Mean hourly wage	Mean annual wage (2)	Wage RSE (3)
894,920	0.7 %	\$10.49	\$21,820	0.3 %

Percentile wage estimates for this occupation:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$7.90	\$8.51	\$9.41	\$11.53	\$14.89
Annual Wage (2)	\$16,430	\$17,700	\$19,570	\$23,980	\$30,980

Industry profile for this occupation: [Top](#)

Industries with the highest published employment and wages for this occupation are provided. For a list of all industries with employment in this occupation, see the [Create Customized Tables](#) function.

Industries with the highest levels of employment in this occupation:

Industry	Employment (1)	Percent of industry employment	Hourly mean wage	Annual mean wage (2)
Traveler Accommodation	420,590	24.16	\$10.33	\$21,490
General Medical and Surgical Hospitals	114,080	2.18	\$11.68	\$24,300
Services to Buildings and Dwellings	96,530	5.23	\$9.86	\$20,510
Nursing Care Facilities (Skilled Nursing Facilities)	79,190	4.76	\$10.12	\$21,050
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	41,360	5.28	\$10.09	\$20,980

Industries with the highest concentration of employment in this occupation:

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Occupational Employment and Wages, May 2012

37-3011 Landscaping and Groundskeeping Workers

Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units. Excludes "Farmworkers and Laborers, Crop, Nursery, and Greenhouse" (45-2092).

- National estimates for this occupation
- Industry profile for this occupation
- Geographic profile for this occupation

National estimates for this occupation: Top

Employment estimate and mean wage estimates for this occupation:

Employment (1)	Employment RSE (3)	Mean hourly wage	Mean annual wage (2)	Wage RSE (3)
830,640	0.6 %	\$12.44	\$25,870	0.3 %

Percentile wage estimates for this occupation:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$8.33	\$9.39	\$11.33	\$14.38	\$18.16
Annual Wage (2)	\$17,330	\$19,520	\$23,570	\$29,900	\$37,770

Industry profile for this occupation: Top

Industries with the highest published employment and wages for this occupation are provided. For a list of all industries with employment in this occupation, see the Create Customized Tables function.

Industries with the highest levels of employment in this occupation:

Industry	Employment (1)	Percent of industry employment	Hourly mean wage	Annual mean wage (2)
Services to Buildings and Dwellings	454,150	24.61	\$12.07	\$25,100
Other Amusement and Recreation Industries	86,600	7.98	\$11.27	\$23,450
Local Government (OES Designation)	76,080	1.39	\$14.54	\$30,250
Elementary and Secondary Schools	19,370	0.23	\$15.36	\$31,950
Lessors of Real Estate	17,820	3.17	\$11.96	\$24,880

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Table 22
Characteristics for Initially Active Women with High School Diploma

Age	WLE	Mean	Median	Mode	SD	SK	KU	10%	25%	75%	90%	WLE-B	SE-B
17		33.55	34.50	35.50	9.61	-0.27	3.10	20.50	27.50	40.50	45.50	38.51	0.26
18		32.91	33.50	34.50	9.55	-0.26	3.07	20.50	26.50	39.50	44.50	32.86	0.25
19		32.28	32.50	33.50	9.49	-0.25	3.05	19.50	26.50	38.50	44.50	32.24	0.25
20		31.65	32.50	33.50	9.43	-0.25	3.03	19.50	25.50	38.50	43.50	31.61	0.25
21		31.07	31.50	32.50	9.36	-0.24	3.01	18.50	24.50	37.50	42.50	31.02	0.25
22		30.48	30.50	32.50	9.29	-0.23	2.99	18.50	24.50	36.50	41.50	30.44	0.25
23		29.90	30.50	31.50	9.21	-0.22	2.98	17.50	23.50	36.50	41.50	29.86	0.23
24		29.30	29.50	31.50	9.13	-0.22	2.96	17.50	23.50	35.50	40.50	29.26	0.24
25		28.68	29.50	30.50	9.04	-0.21	2.94	16.50	22.50	35.50	39.50	28.65	0.23
26		28.05	28.50	29.50	8.96	-0.20	2.92	16.50	22.50	34.50	39.50	28.03	0.24
27		27.41	27.50	29.50	8.87	-0.19	2.91	15.50	21.50	33.50	38.50	27.38	0.24
28		26.77	27.50	28.50	8.78	-0.18	2.89	15.50	20.50	32.50	37.50	26.72	0.22
29		26.11	26.50	28.50	8.69	-0.17	2.88	14.50	20.50	32.50	36.50	26.07	0.22
30		25.46	25.50	27.50	8.59	-0.16	2.87	14.50	19.50	31.50	36.50	25.43	0.22
31		24.81	25.50	26.50	8.50	-0.15	2.86	13.50	19.50	30.50	35.50	24.78	0.22
32		24.14	24.50	26.50	8.40	-0.14	2.84	12.50	18.50	29.50	34.50	24.12	0.22
33		23.48	23.50	25.50	8.30	-0.13	2.83	12.50	17.50	29.50	33.50	23.45	0.21
34		22.82	23.50	24.50	8.20	-0.12	2.82	11.50	17.50	28.50	32.50	22.79	0.21
35		22.17	22.50	24.50	8.09	-0.11	2.81	11.50	16.50	27.50	32.50	22.14	0.21
36		21.51	21.50	23.50	7.98	-0.09	2.80	10.50	16.50	27.50	31.50	21.48	0.19
37		20.85	21.50	22.50	7.87	-0.08	2.80	10.50	15.50	26.50	30.50	20.81	0.19
38		20.18	20.50	22.50	7.75	-0.06	2.79	9.50	14.50	25.50	29.50	20.14	0.19
39		19.50	19.50	21.50	7.63	-0.04	2.78	9.50	14.50	24.50	29.50	19.47	0.18
40		18.83	19.50	21.50	7.51	-0.02	2.78	8.50	13.50	23.50	28.50	18.79	0.18
41		18.14	18.50	20.50	7.38	0.01	2.77	8.50	13.50	23.50	27.50	18.10	0.18
42		17.44	17.50	19.50	7.25	0.03	2.77	7.50	12.50	22.50	26.50	17.40	0.18
43		16.76	16.50	18.50	7.12	0.06	2.77	7.50	11.50	21.50	25.50	16.71	0.18
44		16.07	16.50	17.50	6.99	0.09	2.78	6.50	11.50	20.50	24.50	16.03	0.18
45		15.38	15.50	16.50	6.84	0.12	2.79	6.50	10.50	19.50	24.50	15.35	0.17
46		14.71	14.50	16.50	6.70	0.15	2.81	5.50	9.50	19.50	23.50	14.68	0.16
47		14.06	14.50	15.50	6.54	0.19	2.83	5.50	9.50	18.50	22.50	14.02	0.16
48		13.41	13.50	14.50	6.38	0.23	2.86	4.50	8.50	17.50	21.50	13.38	0.17
49		12.77	12.50	13.50	6.21	0.27	2.90	4.50	8.50	16.50	20.50	12.75	0.16
50		12.13	11.50	12.50	6.04	0.32	2.94	4.50	7.50	15.50	20.50	12.11	0.16
51		11.50	11.50	11.50	5.87	0.38	3.00	3.50	7.50	15.50	19.50	11.48	0.16
52		10.88	10.50	10.50	5.69	0.44	3.06	3.50	6.50	14.50	18.50	10.86	0.15
53		10.26	9.50	9.50	5.51	0.50	3.14	3.50	6.50	13.50	17.50	10.25	0.15
54		9.65	9.50	8.50	5.34	0.57	3.22	2.50	5.50	12.50	16.50	9.64	0.15
55		9.03	8.50	7.50	5.17	0.64	3.32	2.50	5.50	12.50	16.50	9.03	0.15
56		8.43	7.50	7.50	5.00	0.71	3.42	2.50	4.50	11.50	15.50	8.42	0.14
57		7.84	7.50	6.50	4.84	0.79	3.53	2.50	4.50	10.50	14.50	7.82	0.14
58		7.26	6.50	5.50	4.69	0.86	3.65	1.50	3.50	9.50	13.50	7.24	0.14
59		6.73	5.50	4.50	4.54	0.93	3.77	1.50	3.50	9.50	13.50	6.71	0.14
60		6.23	5.50	3.50	4.40	1.00	3.89	1.50	2.50	8.50	12.50	6.21	0.15
61		5.77	4.50	2.50	4.26	1.05	3.99	1.50	2.50	8.50	11.50	5.75	0.16
62		5.38	4.50	1.50	4.13	1.10	4.08	0.50	2.50	7.50	11.50	5.36	0.16
63		5.07	4.50	0.50	4.01	1.13	4.15	0.50	1.50	7.50	10.50	5.04	0.16
64		4.82	3.50	0.50	3.89	1.16	4.19	0.50	1.50	6.50	10.50	4.80	0.17
65		4.62	3.50	0.50	3.76	1.17	4.21	0.50	1.50	6.50	9.50	4.69	0.17
66		4.43	3.50	0.50	3.64	1.18	4.22	0.50	1.50	6.50	9.50	4.41	0.19
67		4.26	3.50	0.50	3.52	1.19	4.21	0.50	1.50	6.50	9.50	4.23	0.18
68		4.11	3.50	0.50	3.40	1.19	4.19	0.50	1.50	5.50	8.50	4.07	0.20
69		3.96	3.50	0.50	3.28	1.19	4.16	0.50	1.50	5.50	8.50	3.92	0.21
70		3.79	2.50	0.50	3.15	1.19	4.12	0.50	1.50	5.50	8.50	3.74	0.20
71		3.64	2.50	0.50	3.03	1.18	4.05	0.50	1.50	5.50	8.50	3.58	0.20
72		3.48	2.50	0.50	2.91	1.16	3.95	0.50	1.50	4.50	7.50	3.43	0.21
73		3.33	2.50	0.50	2.78	1.14	3.83	0.50	1.50	4.50	7.50	3.29	0.22
74		3.19	2.50	0.50	2.65	1.10	3.68	0.50	1.50	4.50	7.50	3.14	0.24
75		3.05	2.50	0.50	2.51	1.05	3.53	0.50	1.50	4.50	6.50	2.98	0.24



NEWS RELEASE



For release: 10:00 a.m. (EDT), Tuesday, September 9, 2014

USDL-14-1671

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CONSUMER EXPENDITURES – 2013

Average expenditures per consumer unit¹ in 2013 were \$51,100, little changed from 2012 levels, the U.S. Bureau of Labor Statistics reported today. In 2013 spending decreased 0.7 percent during the same period that the Consumer Price Index (CPI-U) increased 1.5 percent. In 2012 spending had increased 3.5 percent, outpacing the increase in prices. In 2013 average income per consumer unit edged down from 2012.

Most of the major components of household spending decreased in 2013, as shown in table A. The largest declines occurred in the all other expenditures (-8.2 percent) and apparel and services (-7.6 percent) components. The all other expenditures category includes alcoholic beverages, education, miscellaneous, personal care products, reading, and tobacco products, all of which showed decreases. The only major components of household spending to increase were healthcare (2.1 percent), housing (1.5 percent), and transportation (0.1 percent). Overall food expenditures did not change in 2013, however food at home increased 1.4 percent while food away from home decreased 2.0 percent. Other highlights include a 4.7-percent decrease in entertainment spending and a 4.1-percent decrease in cash contributions.

Changes to Consumer Expenditures (CE) Tax Data

The CE introduced new estimates of state and federal tax liabilities using the TaxSim calculator produced by the National Bureau of Economic Research (NBER). Beginning with the second quarter of 2013, the state and federal tax amounts used in the tables are estimates based on the expenditures and income and family characteristics. The CE gratefully acknowledges the support of NBER. These estimates improve the quality of the tax liabilities data along with estimates of after-tax income data. The tax data collected directly from consumer units during the Interview survey will be available in the 2014 public use microdata, after which they will no longer be collected. A report analyzing the impact of the change is forthcoming.

Table A. Average annual expenditures and characteristics of all consumer units and percent changes, 2011-2013

Item	2011	2012	2013	Percent change	
				2011-2012	2012-2013
Average annual expenditures:					
Total.....	\$49,705	\$51,442	\$51,100	3.5	-0.7
Food.....	6,458	6,599	6,602	2.2	0.0
At home.....	3,838	3,921	3,977	2.2	1.4
Away from home.....	2,620	2,678	2,625	2.2	-2.0
Housing.....	16,803	16,887	17,148	0.5	1.5
Apparel and services.....	1,740	1,736	1,604	-0.2	-7.6
Transportation.....	8,293	8,998	9,004	8.5	0.1
Healthcare.....	3,313	3,556	3,631	7.3	2.1
Entertainment.....	2,572	2,605	2,482	1.3	-4.7
Cash contributions.....	1,721	1,913	1,834	11.2	-4.1
Personal insurance and pensions.....	5,424	5,591	5,528	3.1	-1.1
All other expenditures.....	3,382	3,557	3,267	5.2	-8.2
Consumer unit characteristics:					
Number of consumer units (000's).....	122,287	124,416	125,670		
Average age of reference person.....	49.7	50.0	50.1		
Average number in consumer unit:.....					
People.....	2.5	2.5	2.5		
Earners.....	1.3	1.3	1.3		
Vehicles.....	1.9	1.9	1.9		
Percent homeowner.....	64.9	64.3	63.7		
Income before taxes.....	\$63,685	\$65,596	\$63,784	3.0	-2.8

Spending patterns, 2012-2013

Table B and chart 1 highlight spending patterns of selected components. Spending changes included:

- Health insurance spending routinely accounts for 61 percent of overall health care expenditures. The 21.8-percent increase in health insurance expenditures since 2010 was the driving force behind the increased expenditures on overall healthcare, an 8.2 percent increase from 2012 to 2013. The percent reporting health insurance expenditures changed from 64 percent in 2010 to 65 percent in 2013.
- Gasoline expenditures decreased by 5.1 percent from 2012 to 2013. In the CPI-U, the average price per gallon for all types of gasoline for 2013 dropped 3.0 percent from 2012.
- Overall expenditures on transportation were essentially unchanged due to lower gasoline spending being offset by a 1.9-percent increase in vehicle expenditures from 2012 to 2013.
- Apparel spending continued to decline. The drop from 2012 to 2013 was widespread across most of the subcategories, including an 8.3-percent drop for men and boys clothing and a 7.6-percent drop for women and girls clothing.
- The decrease in cash contributions from 2012 to 2013 can largely be attributed to a 9.1-percent decrease in contributions to charities and a 4.8-percent drop in contributions to church and religious organizations.



Department of Economics (economics)

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Rick Hirschi

Economics



Education

- Ph.D. in Agricultural Economics, 1999, University of Illinois
- M.S. in Agricultural Economics, 1994, Utah State University
- B.S. in Agricultural Economics, 1992, Utah State University
- B.S. in Business, 1992, Utah State University

Interests

- Development and Regional Economics
- Agricultural Economics
- Forensic Economics

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 208-496-3806 (tel:2084963806)
hirschi@byui.edu (mailto:hirschi@byui.edu)
<http://emp.byui.edu/hirschi/>

Current Schedule

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Proceedings Papers

- Hirschi, R.L., R.H. Hornbaker, J.B. Braden, and E.A. DeVuyst. "Agricultural Floodplain Management Strategies After the 1993 Flood," Proceedings of the Eighth Annual Conference, Illinois Groundwater Consortium, Research on Agricultural Chemicals in Illinois Groundwater: Status and Future Directions VIII, April 1-2, 1998, Makanda, Illinois, pp.22-30.
- Hirschi, R.L., R.H. Hornbaker, E.A. DeVuyst, J.B. Braden. Agricultural Floodplain Management Strategies After the 1993 Flood. *Research on Agricultural Chemicals in Illinois Groundwater: Status and Future Directions*, Vol. VII, Proceedings of the Illinois Groundwater Consortium Seventh Annual Conference, Makanda, IL, March 26, 1997.
- Hirschi, R.L., J.B. Braden, E.A. DeVuyst and R.H. Hornbaker. Flood Easements as a Mitigation Option. *Rivertech96 First International Conference on New/Emerging Concepts for Rivers Proceedings*, Vol. 2, Chicago, IL, Sep. 22-26, 1996, pp. 797-805.
- Hirschi, R.L., J.B. Braden, E.A. DeVuyst and R.H. Hornbaker. Easements as a Flood Management Option. *Integrated Management of Surface and Ground Water*, Proceedings of The Universities Council on Water Resources Annual Meetings, San Antonio, TX, July 30-Aug. 2, 1996, pp. 240-249.
- Hirschi, R.L., R.H. Hornbaker, E.A. DeVuyst, J.B. Braden, D.C. White and D.A. Evans. Agricultural Floodplain Management Strategies After the 1993 Flood. *Research on Agricultural Chemicals in Illinois Groundwater: Status and Future Directions*, Vol. VI, Proceedings of the Illinois Groundwater Consortium Sixth Annual Conference, Makanda, IL, March 27-28, 1996, pp.27-31.

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LARS THOMAS CONWAY, MD
ATTACHMENTS

CURRICULUM VITAE
Lars Thomas Conway, M.D.

Personal Data

- Date of birth: [REDACTED]
- Place of birth: Memphis, Tennessee
- Home address: 145 Moose St, PO Box 10592
Jackson, WY 83002
- Married, six children ages 19-31

Current Position

- Medical Director, St. John's Medical Center Laboratory, Jackson, WY (2013 to present)
- President & Medical Director, Teton Pathology (May, 2013 to present)

Past Clinical Laboratory Positions

- Medical Director Lufkin Laboratories (1984-1987)
- Author Lufkin Letters (monthly clinical laboratory update publication (1984-1989).
- Medical Director of Smith-Kline-Beecham Medical Laboratory, Minneapolis (1987-1995)
- Medical Director Quest Laboratory, Minnesota (1996)
- President, Three Rivers Pathology, Roseville, MN (1991-2013)
- Medical Director, St. Francis Regional Medical Center Laboratory, Shakopee, MN (1984- 2013)

Hospital Staff Positions

- Laboratory Medical Director St. Francis Regional Medical Center
- Chief of Staff St. Francis Regional Medical Center
- Vice-Chief of Staff St. Francis Regional Medical Center
- Chairman Credentials Committee St. Francis Regional Medical Center
- Chairman Blood Bank Committee St. Francis Regional Medical Center
- Chairman Education Committee St. Francis Regional Medical Center
- Medical Director Northfield Hospital Laboratory
- Medical Director St Croix Falls Regional Medical Center Hospital Laboratory
- Surgery Committee, Credentials Committee, St John's Medical Center

Experience with Credentialing Services

- Have led six CAP hospital laboratory inspection teams
- Have been inspected by multiple CAP & JCAHCO hospital lab inspection teams; multiple CLIA inspection teams and HHS clinical laboratory inspection teams

Education

- Brown University, Providence, RI., B.A. Physics, 1974
- University of Tennessee Center for the Health Sciences, Memphis, TN; M.D. 1977

- Internship in Internal Medicine, Hennepin County Medical Center, Minneapolis, MN. 1978-79
- Residency in Anatomic and Clinical Pathology, Hennepin County Medical Center, Minneapolis, MN; 1979-1983
- Blood Bank fellowship, University of Minnesota, 1983-4

Licensure

- Arizona#46899
- Idaho #M12068
- Wyoming # 9164A

Board Certification

- American Board of Pathology Certification in Anatomic and Clinical Pathology; June, 1983
- American Board of Pathology Certification in subspecialty of Cytopathology, 1996

Professional Associations

- College of American Pathologists
- Minnesota Society of Pathologists (co-chair of task force on direct billing)

Medical Staff Positions

- Chief of Staff, St Francis Regional Medical Center, 1991
- Vice Chief of Staff, St Francis Regional Medical Center, 1990
- Chairman of Credentials Committee, St Francis Regional Medical Center, 1992-3
- Cancer committee member, 1997 to present, St. Francis Regional Medical Center
- Surgery Committee Member at St. Francis Regional Medical Center 1984 to 2013
- Transfusion committee Chair at St. Francis Regional Medical Center 1984 to 2013

Honors

- AOA (medical academic honor society), University of Tennessee Center for the Health Sciences, Memphis, TN, 1977
- Special Achievement Award for Scholarship and Leadership, University of Tennessee center for the Health Sciences, 1977
- Touchstone Award, 2007, Awarded to single medical staff member at St. Francis Regional Medical Center for outstanding leadership, service and embodiment of hospital values

Publications

- Lars Conway, et al, Natural History of Primary Autoimmune Neutropenia in Infancy, Pediatrics, 1987; 79(5) : 728-33.
- Lars Conway, et al, Acute Hemolytic Transfusion Reaction Due to ABO Incompatible Platelet Pheresis Concentrate; Transfusion, 1984; 24(5): 413-414.
- Monthly editions of the Lufkin Letter (6-8 page mailing to clients) 1984-1989

Pathology Experience

- Molecular pathology, medical direction over lab areas including PCR, hybrid capture (predominantly CT/NG, HPV)
- Cytopathology including strong experience in cervical cytology, thyroid FNA cytology, urine cytology

- Hematology – Approximately 30 to 50 bone marrow biopsies performed and interpreted annually while in Minnesota with additional 10-15 interpretation only
- Urologic pathology- Review approximately 300 prostate cases while in Minnesota (each case usually 6 parts) annually with lesser number of bladder biopsies
- Review large number of skin biopsies (approximately 1000 cases) annually while in Minnesota
- Broad experience with GYN pathology while in Minnesota (most commonly cervical cytology and biopsies followed by endometrial biopsies)
- Strong experience in blood bank (fellowship followed by medical direction of hospital blood banks throughout career)
- Certified for conscious sedation (active DEA certification)

AUTOPSY REPORT

Herrera, Monica

AUTOPSY NUMBER: A15-01

DOB: [REDACTED]

Expired: 01/30/2015, 20:25

Permit: Coroner, Teton County, Wyoming – Dani Spence

Autopsy: 01/31/2015, 10:00, Teton County Morgue, Jackson Wyoming

HISTORY

The patient is a middle aged woman who works as a cleaning woman. She arrived at a site and performed cleaning at approximately 9:00 a.m. She had an appointment at 2:00 p.m. with her husband and did not arrive for that appointment. She was found at 19:32 and she was pronounced dead after attempted resuscitation at 20:25.

Reportedly carbon monoxide levels were elevated through the house.

GROSS EXAMINATION

External Examination: The body is that of an obese Hispanic female. There does not appear to be any evidence of external trauma. No blood is present in the hair and lacerations are noted on the body. The pupils midpoint and fixed. There is a very deep cherry red color to the skin particularly of the face. There is non-relenting rigor in the extremities. On examination of the chest and abdomen, no evidence of previous surgical intervention is observed. No masses are seen. The breast are relatively pendulous and again without masses. The external genitalia are those of a normal adult female. No evidence fractures are noted on examination of the extremities.

Internal Examination: The body is opened in a routine Y-fashion. The ribs are exposed. The subcutaneous fat layer is relatively thick measuring 4 to 6 inches in thickness over the mid abdomen. The ribs are removed from the anterior chest. No fluid is noted in the pleural cavities or within the pericardial cavity. No fluid is noted in the peritoneal cavity. The stomach appears to be somewhat over inflated with air possibly occurring during the resuscitate efforts. The structures of the neck are dissected and the trachea transected superior to the laryngeal cartilage. The chest contents are removed en bloc including trachea, esophagus, thyroid, lungs and heart.

Thyroid: The thyroid is present in its normal location anterior to the thyroid cartilage and weighs approximately 13 gm. No masses are noted. No abnormal features are seen.

Trachea: The trachea is opened posteriorly. No masses are noted in the trachea. There does not appear to be appreciable foreign material in the trachea. The larynx is normally formed. The vocal cords are examined and without masses or papillomata.

Esophagus: The esophagus is opened posteriorly and no masses are noted. No esophagitis is observed.

Lungs: The main stem bronchi are opened. No masses are noted in the main stem bronchi. No evidence of aspiration is observed. The left lung weighs 543 gm and the right lung 633 gm. No

Herrera, Monica

AUTOPSY NUMBER: A15-01

Page 3

sections of lungs there is pulmonary edema without areas of pneumonitis observed. No masses are seen.

Heart: The heart weighs 398 gm. The heart is normal size. There does not appear to be appreciable left ventricular hypertrophy or chamber dilation. The coronary arteries are serially sectioned. It appears to be a right dominant coronary system without appreciable atherosclerotic change noted within the coronary vessels. The four chambers of the heart are opened sequentially. The tricuspid, pulmonic, mitral and aortic valves are normally formed. The right ventricle, right atrium, left atrium and left ventricle are of normal size and without mural thrombi. No endocardial discoloration is seen. The myocardium is sectioned and no evidence of myocardial injury is observed on gross examination.

Liver: The liver weighs 2,528 gm. The surface of the liver is smooth without nodularity. The gallbladder is present in its normal intrahepatic location and is without evidence of cholelithiasis. On section of the liver that is a question of mild centrilobular congestion without evidence of nodularity or masses. No abnormalities are seen in the liver aside from congestion.

Spleen: The spleen weighs 275 gm and is present in its normal location in the right upper quadrant distal to the pancreas. The spleen appears to be mildly congested without masses, laceration or infarction observed.

Pancreas: The pancreas weighs 150 gm and is present in its normal retroperitoneal location. No abnormalities are observed. No masses are noted.

Adrenal glands: The adrenal glands weigh approximately 34 gm together and have a normal appearance. No masses are observed.

Kidneys: The kidneys are normally formed and have a relatively smooth surface without prominent surface granularity. The corticomedullary junction is distinct bilaterally without calyceal or ureteral dilation. No masses are seen in either kidney. The left kidney weighs 191 gm and the right kidney 220 gm. The ureters insert into a normal fashion into the bladder.

Bladder: The bladder is of normal size without masses observed.

Internal genitalia: The right and left ovaries are identified with the associated fallopian tubes. There is a cystic lesion in the right ovary measuring approximately 2 cm, which appears to be a follicular type. No evidence of neoplasia or endometriosis is seen. The fallopian tubes are normally formed. There is evidence of previous vaginal hysterectomy. There is scarring of the superior vaginal vault without uterine corpus observed.

Ancillary studies: A sample of sodium heparin blood was obtained from the deceased right subclavian vein and this was submitted for carboxyhemoglobin analysis at St. John's Hospital. The carboxylhemoglobin level is reported as 76%. This was performed in the cardiopulmonary laboratory under direct observation of Dr. Conway.

Herrera, Monica

AUTOPSY NUMBER: A15-01
Page 4

REVIEW OF BLOCKS

Blocks 1-2: right and left kidneys
Block 3: liver and spleen
Block 4: thyroid and adrenal
Block 5: ovary with cyst and pancreas
Block 6: myocardium
Blocks 7-9: sections of lung

MICROSCOPIC EXAMINATION

Lungs: Sections of lung show mild pulmonary congestion and focal pulmonary edema. No pneumonitis or evidence of neoplasia is observed. No features strongly suggestive of aspiration are identified.

Heart: Sections of myocardium show myocardium without pathologic abnormality. No evidence of acute or old myocardial infarction is observed.

Ovaries: Sections of ovary include a cystic follicle. No endometriosis or evidence of neoplasia is observed.

Pancreas: Sections of pancreas show extensive autolytic change without pathologic features identified.

Kidney: Sections of kidney show a normal corticomedullary junction without evidence of nephritis or other renal abnormalities.

Spleen: Sections of spleen show splenic congestion.

Liver: Sections of liver show steatosis and mild steatohepatitis. There are some aggregates of mononuclear cells in the hepatic lobules. There does not appear to be appreciable periportal fibrosis.

Adrenals: Sections of adrenal glands are unremarkable.

Thyroid: Sections of thyroid show normal thyroid parenchyma without inflammatory activity observed.

SUMMARY

The deceased expired secondary to carbon monoxide poisoning with the carboxyhemoglobin level recorded at the time of death at 76%.

Other findings on autopsy include mild steatohepatitis. This often occurs in patients with diabetes mellitus or obesity. The pulmonary edema/congestion and centrilobular hepatic congestion are common perimortem findings.

Lars T Conway, M.D.
March 18, 2015

Teton County Coroner's Office**Brent A. Blue, Coroner**

P. O. BOX 1687

Jackson, WY 83001

307-733-2331 bblue@tetonwyo.org

Comprehensive Case Summary**Demographics - Basic**

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Decedent Name Monica Miranda Luna Herrera		Case Number 2015-004		Case Type		Case Status Closed	
Date of Birth [REDACTED]		Date and Time of Death 1/30/2015 12:00:00 AM		Age 47Years		Place of Birth	
Race Hispanic		Sex Female		Social Security # [REDACTED]		Marital Status Married	
Home Phone							
Address/City/State/Zip [REDACTED] Driggs, ID 83422							
Height 5' 4"		Weight 250		Hair Color Mixed		Eye Color	
Have Passport		Passport Date of Issue					
Mother's Full Name Miranda				Father's Full Name			
Employer Buckingham, Greg		Occupation Housekeeper				Employer Phone	
Employer Address/City/State/Zip [REDACTED], Kelly, WY 83911							
Identified By What Means Family				Identified By Name Francisco Herrera			
Address/City/State/Zip [REDACTED] Driggs, ID 83422						Phone (208) 766-3330	
Time and Date 1/30/2015 9:11 PM				Location on scene			

Teton County Coroner's Office

Brent A. Blue, Coroner

P. O. BOX 1687

Jackson, WY 83001

307-733-2331 bblue@tetonwyo.org

Demographics - Professionals

Decedent Name Monica Miranda Luna
Case # Herrera
Date of Death 2015-004
 4/30/2015

Family Doctor	
Name	Phone Number
Address	
City/State/Zip	

Dentist	
Name	Phone Number
Address	
City/State/Zip	

Funeral Home		
Funeral Home Name	Funeral Home Representative	
Valley Mortuary	Tyson	
Address	Telephone	
950 Alpine Drive	(307) 733-8267	
City/State/Zip	Person in Charge of Funeral Arrangements	
Jackson, WY 83001		
When will Next of Kin Call	Type of Service	
1/1/1		

Teton County Coroner's Office**Brent A. Blue, Coroner**

P. O. BOX 1687

Jackson, WY 83001

307-733-2331 bblue@tetonwyo.org

Demographics - Physical

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Build Overweight	Hair Type Own Hair	Was Deceased Bald? Not Bald	If Not Bald, Hair Length Long	
Facial Hair None			Color of Facial Hair	
Fingernail Length Medium	Fingernail Polish Yes	Fingernail Polish Color Beige	Toenail Polish Yes	Toenail Polish Color Pink
Have Own Teeth	If No, Any Dentures	Denture Type	Denture Description	
Any Seeing Aids	If Eyeglasses, Which Style	If Eyeglasses, What Frames	If Eyeglasses, What Color	
Eyeglasses Description				
Any Birthmarks	Birthmark Location	Birthmark Description		
Any Tattoos No	Tattoo Location	Tattoo Description		

Teton County Coroner's Office**Brent A. Blue, Coroner**

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Jackson, WY 83001

307-733-2331 bblue@tetonwyo.org

Demographics - Clothing

Decedent Name Monica Miranda Luna
Case # Herrera
Date of Death 2015-004
4/30/2015

Describe the Way the Deceased was Dressed				
plaid cotton stretch pants, tan lightweight sweater, black insulated vest, underwear, bra - -clothing had been cut for life saving attempts				
Type of Clothing	Shirt	Color of Shirt	Pants or Skirt	Pant or Skirt Length
Female	Long Sleeve	Brown	Pants	
Pant/Skirt Style	Belt	Socks	Sock Color	
Casual				
Shoes	Shoe Color	Shoe Size	Coat Length	Coat Material
		0		
Describe Underclothing				
bra and underwear				
Was Clothing Ever Professionally Laundered		Name of Laundry		Phone
Address of Laundry			City, State, Zip	
			, 0	
Other Important Information About Clothing That Could be Useful				
Is there a Photograph of the Deceased Available		Was Clothing In Disarray		
Yes		Yes		
If Clothing in Disarray, Describe				
Clothing was cut by medical personnel for life saving attempts. Clothing did not appear to have anything suspicious about it.				

Teton County Coroner's Office

Brent A. Blue, Coroner

P. O. BOX 1687

Jackson, WY 83001

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Demographics - Jewelry

Decedent Name Monica Miranda Luna
Case # Herrera
Date of Death 2015-0015
 4/30/2015

Was Deceased Wearing Jewelry	Yes	Describe In Detail	3 rings on her fingers - remained on deceased and still on deceased when released to funeral home. Photographs available.
Any Earrings		Describe In Detail	
Any Other Piercings		Describe In Detail	
Any Watch		Type	Describe In Detail
Any Chain or Necklace		Describe In Detail	
Any Bracelets		Describe In Detail	
Any Ankle Bracelet		Describe In Detail	
Any Pins or Broaches		Describe In Detail	
Any Other Jewelry			
Was Deceased Wearing Jewelry That Belonged to Someone Else		Did Deceased Conceal Valuables in the Lining of Clothing or Other Location	
		No	
Describe Concealed Valuables			

Teton County Coroner's Office**Brent A. Blue, Coroner**

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Case Checklist

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

<u>Item</u>	<u>Status</u>	<u>Notes</u>
Public Information Sheet	N/A	
Property Form	N/A	
Prescription Form	N/A	
Evidence Form	N/A	
ID Band On Body	N/A	
Funeral Home Release Signed	N/A	
Property Release Signed	N/A	
Next of Kin Notified	Completed	Husband on scene on coroner arrival
Police Report Requested	N/A	
Ambulance Report Requested	N/A	
Hospital Records Requested	N/A	
Other Reports Requested	N/A	
X-Rays Obtained	N/A	
Scene Photographs	N/A	
Morgue Sheet Started	Completed	Coroner Face Sheet completed
Fingerprints Completed	N/A	

Teton County Coroner's Office

Brent A. Blue, Coroner

P. O. BOX 1687

Jackosn, WY 83001

307-733-2331 bblue@tetonwyo.org

ID Photograph Taken	Completed	

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Agencies / Officers

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

	<u>Name</u>	<u>Rank/Position</u>	<u>Department</u>
Primary Police	Kurt Drumheller	Deputy Patrol	TCSO
Primary Fire	Jim Tucker	Battalion Chief	JH Fire/EMS
Primary EMS			
		Other	
One			
Two			
Three			
Four			
Five			
Six			
Seven			
Eight			
Nine			
Ten			
Eleven			
Twelve			
Thirteen			
Fourteen			
Fifteen			
Sixteen			
Seventeen			

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Next Of Kin

Decedent Name Monica Miranda Luna Herrera

Case # 2015-004

Date of Death 1/30/2015

Name Fransisco Herrera		Relationship Spouse
Notified Yes	Notified Date & Time 1/30/2015	Notified By Caretaker
Phone (208) 766-3330		Other Phone
Address [REDACTED]		
City/State/Zip Driggs, WY 83422		

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Scene

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Light Condition		Weather Conditions		Outside Temp	Inside Temp
Was the AC or Furnance Operating		Setting of Thermostat		Location of Decedent at Scene (Exact Location)	
Body Position (Direction) - Head		Body Position (Direction) - Feet		Body Position (Direction) - Lying	
If Other Describe					
Surface Type Decedent's Body Lyng On		If Other Describe	Subject was found by caretaker face down in entryway. Upon coroner arrival, subject had already been moved for live saving attempts. Upon coroner arrival, subject was inside ambulance on guerney		
Describe any Disarray	see TCSO report for information				
If a Building/Dwelling Was the Location Secure		Describe Locks on Doors and Windows			
If Blood Found at Scene, Beneath What Body Area			Surface Where Blood Found		Quantity of Blood
Condition of Bloodstains		If Other Describe			
Other Observations at Scene					
Any Drugs/Alcohol Found at Scene		If Yes, What Kind of Alcohol/Drugs			
Any Notes/Letters Found at Scene		Dated	Location Found		
Any Resuscitation Attempts At Scene	Yes	If Yes, Describe Procedures in Detail	see JH Fire/EMS report		
If Oxygen Given To a Fire/Arson Victim, Determine the Length of Time Administered					

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Morgue Conveyance

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Time Called	Scene Arrival	Conveyance	
Conveyance Attendants		Jewelry or Valuable Left on Body Being Transported to Morgue	Yes
If Yes, Describe Items	3 rings on her hands		
Arrival Time at Morgue 10:56 PM	Do Jewelry and Valuable Items Received By Morgue Personnel Agree with Those Left on Body When It Left The Scene		Yes

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Autopsy

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Was an Autopsy Requested Yes		Was an Autopsy Performed Yes		If Yes, Where Morgue	
Who Was the Pathologist Conway		Were Autopsy Results Available Before Completing Cause of Death		No	Was Family Notified of Cause of Death After Autopsy Complete Yes
Who Notified Family Dani Spence			Date Family Notified 1/31/2015		
Donor	Donor of What		Retrieval Organization		

Teton County Coroner's Office**Brent A. Blue, Coroner**

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Cause/Manner

Decedent Name Monica Miranda Luna
Case # Herrera
Date of Death 2015-004
 1/30/2015

Pronouncement of Death (Date & Time) 1/30/2015 8:25 PM		By Dani Spence		Estimated Time of Death #Error	
Position Deputy Coroner			Location Kelly		
Cause of Death 1 Carbon Monoxide Poisoning					
Cause of Death 2					
Cause of Death 3					
Contributing Factors					
Mechanism of Death					
Manner Accidental	Alcohol/Drug Test	BAC Result Pending	Drug Test Positive	Alcohol/Drug Contribute to Death	

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Medical History

Decedent Name	Monica Miranda Luna Herrera
Case #	2015-004
Date of Death	1/30/2015

high blood pressure - per NOK

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Personal Effects

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Personal Effects

Item Description	There were 3 rings still on the subject when released to the Mortuary. 2 on her left hand and 1 on her right hand. Her Idaho driver's license was sent in to the state.		
Color	Identifying Marks	Serial Number	Owner
Quantity	Value 0.0000	Track Possession	Taken Into Possession Of
Agency	Location Stored		Date
Has Item Been Released	Released To	Relationship	
Address		City/State/Zip , 0	
Phone Number	Released By	Witnessed By	Date Released

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Narratives

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Case Narrative

On 01-30-15 subject went to employer's home to work as housekeeper. Caretaker's noticed her vehicle was there later than usual and went to check on her. Caretaker found deceased face down in entryway. It did not appear she had traveled more than a few feet into the house. The boiler in the garage was found to be damaged per the caretaker. The fire department is investigating the boiler system and on scene found their carbon monoxide sensors to have topped out at 1000 parts per million at all areas of the house. Autopsy did not reveal any other remarkable contributions to death. Labs revealed a 76% saturation of the blood with carbon monoxide per pathologist.

Media Case Narrative

Teton County Coroner's Office

Brent A. Blue, Coroner

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Medication List

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Medication	Prescribed By	Date Prescribed	Dosage	Regimen	Expected Count	Actual Count
blood pressure					0	0

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Body Exam

Decedent Name Monica Miranda Luna Herrera
Case # 2015-004
Date of Death 1/30/2015

Body Exam - Condition			
Body Temperature 0	Date and Time Taken 1/1/1	If Temp Not Taken, How Did the Body Feel to Touch?	
Livor Mortis Present Yes	If Yes, Where face and thorax	Rigor Mortis Present Yes	If Yes, Where arms and legs
Body Quality		Insects Present	
If Yes, and Not Collecting, Describe Location and Identity			

Body Exam - Injury General		
Head	Face small amount of blood coming from nose	
Neck	Chest	
Back	Buttocks /Pelvic Region	
Upper Extremities	Fingertips to Axilla Length	
Hands	Fingernails Broken No	
Feet	Lower Extremities	
Clothing		Was Death Related to Injury Yes
Other clothing had been cut to access chest for life saving attempts -- AED pads were attached to deceased, IO port was in lower leg, lead pads were stuck on lower legs from EMS -- nothing unusual		

Teton Pathology, P.C.
Lars T. Conway, M.D.
Anatomic & Clinical Pathology
P.O. Box 4940
625 E. Broadway
Jackson, WY 83001
Telephone: (307) 733-6418
Fax: (307) 734-0885

AUTOPSY REPORT

Herrera, Monica

AUTOPSY NUMBER: A15-01

DOB: [REDACTED]

Expired: 01/30/2015, 20:25

Permit: Coroner, Teton County, Wyoming – Dani Spence

Autopsy: 01/31/2015, 10:00, Teton County Morgue, Jackson Wyoming

FINAL ANATOMIC DIAGNOSES

- I. Carbon monoxide poisoning (carboxyhemoglobin level 76%)
- II. Status post vaginal hysterectomy
- III. Mild pulmonary edema
- IV. Mild centrilobular congestion of the liver and moderate steatosis with mild steatohepatitis

Lars T Conway, M.D.
March 18, 2015



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Lars Conway, MD

Pathology

Teton Pathology
Box 4940
Jackson, WY 83001


Primary Phone:

307 733 6418

Fax Number:

307 734 0885

Specializing in:

 Pathology

Certifications:

American Board of Pathology

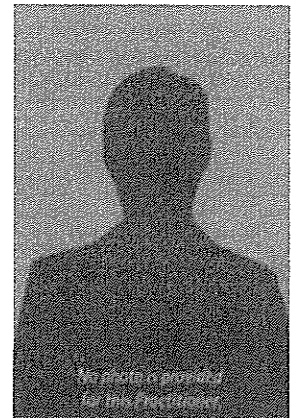
Education:

BA, 1974: Brown University Program in Medicine: Providence, RI

MD, 1977: University of Tennessee College of Medicine, Memphis, TN

Internship & Residency, Anatomic and Clinical Pathology, 1983:
Hennepin County Medical Center, Minneapolis, MN

Fellowship, Blood Banking, 1984: University of Minnesota Hospital &
Cline, Minneapolis, MN



PO Box 428, 625 E. Broadway, Jackson, WY 83001 307 733 3636

In case of emergency, dial 9-1-1

CERTIFICATION OF VITAL RECORD

STATE OF WYOMING

DEPARTMENT OF HEALTH
CERTIFICATE OF DEATH

Decedent: Name: Monica Herrera State File Number: 2015-000301
 Gender: Female Social Security Number: [REDACTED]
 Date of Birth: [REDACTED] Age at the Time of Death: 47 years

Date and Place of Death: Date of Death: January 30, 2015 County of Death: Teton
 City of Death: Kelly
 Location: [REDACTED]

Additional Decedent Information:
 Place of Birth: Hollywood, California
 Residence: Driggs, Idaho
 Marital Status: Married - Francisco Herrera
 Armed Forces: No
 Name of Father: Apolonia Miranda
 Name of Mother: Juanita Luna
 Informant: Francisco Herrera Relationship: Husband
 Disposition: Cremation
 Method of Disposition: Valley Mortuary Crematory, Jackson, Wyoming
 Place of Disposition:
 Funeral Home or Facility: Valley Mortuary, Jackson, Wyoming

Cause of Death:
 The immediate cause is listed on the first line followed by any underlying causes.
 (a) Carbon Monoxide Poisoning Interval: Immediate
 (b) Faulty Furnace Piping

Other Significant Conditions:
 Manner of Death: Accident Time of Death: Approximate 09:00 ±5hrs
 Injury Information: Date Of Injury: January 30, 2015 (Actual) Time Of Injury: Approximate 09:00 ±5hrs
 Injury At Work? Yes
 Location: [REDACTED], Kelly, Wyoming
 Description: Boiler in house was damaged. Carbon Monoxide Poisoning.

Certifier: Type: Coroner
 Name: Brent Blue, Coroner
 Address: 3240 South Adam's Canyon Drive, PO Box 1727, Jackson, Wyoming, 83001
 Date Filed: February 02, 2015

This is a true certification of the document on file in the office of Vital Statistics Services, Cheyenne, Wyoming.

DATE ISSUED: Tuesday, February 03, 2015

This copy is not valid unless prepared on paper with an engraved border.

James McBride
 James McBride
 Deputy State Registrar

